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DRAFT SCRAP YARD INCIDENT DATED 21 NOVEMBER 2003 SAFETY INVESTIGATION  
REPORT NSWC INDIAN HEAD MD  
1/17/2003  
NAVFAC WASHINGTON

Draft of 17 January 2003

# Scrap Yard Incident

(of 21 November 2002)

# Safety Investigation Report



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## SECTION 1.0 INTRODUCTION

### 1.1 FOREWORD

The work reported herein was performed by a Mishap Investigation Team assigned by the Commander of the Indian Head Division of the Naval Surface Warfare Center (IHD NSWC) to investigate the incident that occurred on 21 November 2002 at Installation Restoration (IR) Site 41 or more commonly referred to as the Scrap Yard.

#### Team Members

W. W. Pero (Lead)	Code 30C2, NSWC Indian Head
L. B. Goforth	Code OPR, EFA Chesapeake LANTDIV NAVFAC
T. Craig Smith	Code 420, NSWC Indian Head Division
Anne Caris	Code 2120K, NSWC Indian Head Division
Kristene A. Bigej	Code 041KB, NSWC Indian Head Division
M. E. McCollum	Code N7122, NOSSA
Ralph S. Lucas Jr.	Code 360RL, NSWC Indian Head Division



## 1.2 EXECUTIVE SUMMARY

This report documents the findings and recommendations identified during the investigation of the incident that occurred at IHD NSW IR Site 41, Scrap Metal Yard during a remedial cleanup operation. At 1410 on 21 November 2002, an explosion occurred when one of the contractors involved with the OE removal operation was using a cutting torch to cut what had been identified as an inert ordnance item.

The Mishap Investigation Team, established to investigate the incident, determined the root cause of the incident was ~~not having~~ <sup>by NSW IHD Head Safety Personnel and Contractor UXO personnel</sup> performed positive identification of an ordnance item. This resulted in two separate events that contributed directly to the explosion: (1) the projectile was incorrectly characterized as inert and placed in an "inert materials only" scrap yard and (2) the Scrap Yard remediation contractor did not follow their established screening/inspection procedures and failed to positively identify the item prior to cutting. <sup>the incident could have been avoided (IAW EWC 8))</sup>

<sup>by NSW I.H. Safety staff</sup> The investigation determined through visual examination, laboratory and x-ray testing, personal interviews, and documentation searches that the incident item was in fact a pre-World War II gun projectile, 4"/50 Mk 10 Common. The investigation concluded that an explosive reaction occurred when the torch operator attempted to cut the projectile into longitudinal sections. The heat from the torch caused TNT within the projectile cavity to melt and decompose explosively, resulting in an explosive reaction.

There are 26 opinions and conclusions of which 6 are significant contributing factors ranging from:

- Performance of an OE removal under the auspices of an environmental remediation contract
- Failure to follow operating procedures
- Non-compliance with DoD policy
- Inadequate practices and failure to follow established policies
- Excessive roles and responsibilities
- Ambiguity in governing regulations

There are 33 recommendations provided. Foremost among them are: 1) resolution of issues surrounding decontamination and demilitarization of ordnance and to answer the ultimate question, "Is visual inspection adequate to satisfy criteria for demilitarization using heat-generating devices?" and 2) ~~it is an unsafe practice to utilize an organization with little or no ordnance background and experience to provide project direction and oversight of explosive operations.~~

### 1.3 BACKGROUND

In the early 1990's, it was determined that the soil in the Metal Scrap Yard located at the Indian Head Division of the Naval Surface Warfare Center (IHD NSWC) had PCB contamination. The site was declared an Installation Restoration (IR) site (Site 41). The remediation of Site 41 was slated to begin in FY 2003 through a Multi Contaminate Environmental Remedial Action Contract established and overseen by Naval Facilities Engineering Command. During the removal of surface scrap in preparation for the remediation effort, ordnance and explosive (OE) items were discovered. The remediation contract was hastily modified to remove metal scrap and OE items from the Scrap Yard. Work to remove the OE began on 12 November 2002 by Shaw E&I. The work involved ordnance collection, screening, and demilitarization for turnover as metal scrap to the general public. On 21 November 2002, at approximately 1405 hours, during the torch cutting of a gun projectile, an explosive incident occurred. There were 10 people in the Scrap Yard at the time of the incident. There were no fatalities; the individual performing the cutting received a permanent disabling injury to his lower body; another individual standing nearby received minor skin abrasions and suffered hearing loss. There was no facility or property damage with minimal equipment loss.

Immediately following the incident, the Commander of the Indian Head Division of the Naval Surface Warfare Center chartered the Scrap Yard Investigation Team, Enclosure (4). The Team Members were:

Wesley Pero, Leader	Code 30C2	IHD NSWC
Linda Goforth	Code OPR	NAVFAC/EFACHES
T. Craig Smith	Code 420	IHD NSWC
Anne E. Caris	Code 2012K	IHD NSWC
Kristene A. Bigej	Code 041KB	IHD NSWC
Ralph S. Lucas Jr.	Code 360SL	IHD NSWC
Michael McCollum	Code N712	NOSSA

The results of the investigation are documented in this report. The report is broken into 5 sections. **Section 1**, "Introduction," provides the background information and the executive summary. **Section 2**, "Opinions and Conclusions," provides the opinions and conclusions of the investigation and is separated into root cause, significant factors, item identification, EFACHES/NAVFAC, IHD NSWC, emergency response, and documentation. **Section 3**, "Recommendations," contains the team recommendations, segregated by "action" organization and those recommendations pertaining to the restart of OE removal operations. **Section 4**, "Findings of Fact," presents the findings of the investigation. The findings are grouped into sequence of events and subject areas. **Section 5** contains the Enclosures.

## 1.4 Acronyms

AEDA – Ammunition Explosives and Dangerous Articles  
AP-T – Armor-piercing Traced  
COTR – Contracting Officer Technical Representative  
CPP – Capital Purchase Program  
DEMIL – Demilitarized  
DRMO – Defense Reutilization and Marketing Office  
DTID – Disposal Turn In Document  
EFACHES – Engineering Field Activity Chesapeake  
EMT – Emergency Medical Technician  
EOD – Explosive Ordnance Disposal  
FoF – Finding of Fact  
IHD NSWC – Indian Head Division, Naval Surface Warfare Center  
IR – Installation Restoration  
IWP – Industrial Waste Processor  
IWP – Industrial Waste Processor  
LANTDIV – Atlantic Division, Naval Facilities Engineering Command  
MLI – Military Listed Item  
NAVFAC – Naval Facilities Engineering Command  
NDW – Naval District Washington  
NOSSA – Naval Ordnance Safety and Security Activity  
NTR – Navy Technical Representative  
OE – Ordnance and Explosives  
OHM – OHM Remediation Services Corporation a.k.a. Shaw E&I a.k.a. IT  
OSH – Occupational Safety and Health  
PCB – Polychlorinated Biphenyl  
PDO – Property Disposal Office  
QA – Quality Assurance  
QC – Quality Control  
QRP – Quality Recycling Program  
RAC – Remediation Action Contract  
ROICC – Resident Officer In Charge of Construction  
RPM – Remediation Project Manager  
RRRP – Resource Recovery and Recycling Program  
Shaw E&I – Shaw Environmental and Infrastructure, Inc.  
SOP – Standard Operating Procedure  
TD – Technical Directive  
TNT – Trinitrotoluene  
UXO – Unexploded Ordnance

## SECTION 2.0 OPINIONS AND CONCLUSIONS

### 2.1 Root Cause

1. The root cause of the incident was using incorrect characterization procedures and not having performed positive identification of an ordnance item.  
*by Naval Surface Warfare Center, Indian Head, Safety Specialist*
  - a. The initial assessment of the 4-inch projectile as being empty/inert when unearthed was concluded without inspecting the internal cavities. (FoF 70, 72, and 75)
  - b. The UXO Support Plan did not require 100% positive identification (for example, Mark and Mod). The identification process required by the UXO Support Plan was to determine the segregation category only (Inert; Believed Inert (inaccessible cavities); Potentially Live, But Safe to Move; and Potentially Live, Unsafe to Move). In the case of the 4-inch projectile, if their inspection process had required positive identification, they would have determined the item involved in the incident was a 4-inch Navy projectile instead of a 90 mm Army projectile and unsafe to cut. (FoF 82, 97, 98, 99, 117, 166, and 167.)

### 2.2 Significant Factors

2. IHD NSWC did not remove the surface OE prior to the projected start date of soil remediation at Site 41. This drove the decision to incorporate the removal of the surface OE as part of the NAVFAC environmental process. Personnel and organizations that had little or no ordnance experience were forced into key decision-making roles. This resulted in inadequate planning, review, and contract oversight. Since it was perceived as an environmental task, it lessened the rigor generally used to review for compliance with explosive safety guidelines and requirements. (FoF 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 39, 141, 142, 143, 147, 149, 150, 168, 169, 172, 173, 174, 175, 176, 177, and 200)
3. Shaw E&I's non-compliance with their Standard Operating Procedure (SOP), the UXO Support Plan, allowed variability in the process and work flow, made a hazardous operation more hazardous, and increased the risk for errors and potential mishaps. (FoF 51, 52, 95, 99, 167, 168, 173, 175, 176, and 177)
4. Shaw E&I was performing demilitarization operations in an unsafe manner and in non-compliance with DOD policy. (FoF 54, 95, 99, 166, 167, 168, 170, 171, 172, 173, 175, 176, 177, and 178)
5. IHD NSWC's inadequate practices and procedures, and failure to follow established IHD NSWC policy covering the generation, identification, storage, and disposal of scrap metal resulted in a scrap yard that contained materials of

unknown pedigree. (FoF 27, 53, 57, 58, 74, 76, 77, 78, 80, 182, 183, 184, 185, 187, 188, 189, 190, 191, 192, 193 and 194)

6. At the time of the inspection and selection of the 4-inch projectile for cutting, the operation at the Scrap Yard can be described as "fast-paced." The Senior UXO Supervisor, responsible for all operations at the Scrap Yard, was personally performing and overseeing multiple tasks that reduced the effectiveness of the identification and selection process for the 4-inch projectile. (FoF 91, 92, 93, 94, 96, 97, 99, and 167)
7. There is ambiguity in governing regulations pertaining to the degree of destruction required for ordnance MLI demilitarized ready for turn over to DRMO. For this particular situation since Shaw E&I had misidentified the projectile as a solid-steel 90 mm projectile (not in its original configuration because the tracer and rotating band had been removed), DoD 4160.21-M required no further processing for turn over to DRMO. Since the tracer had been removed and there is no other internal cavity in the 90mm projectile OP-5 requirements were satisfied and the projectile (with rotating band gone) was ready for turn over to DRMO. The only reason this projectile was undergoing further destruction was the verbal agreement between Shaw E&I and the scrap metal contractor. Therefore, there was a high probability the misidentified 4-inch projectile containing TNT would have been sent to the scrap metal contractor. (FoF 38, 42, 71, 97, 196 and 197)

### 2.3 Item Identification

8. The incident, an explosive reaction that occurred at approximately 1400 hours on 21 November 2002, was caused by the ignition and combustion of the TNT/Black Powder contained in a WWII or prior era 4-inch Common Mk 10 Navy projectile with a Base Ignition Fuze Mk 10 Mod 4. Approximately 1 minute of heating from a Petrogen cutting torch caused the TNT within the cavity to melt and decompose explosively, resulting in an explosive reaction. (FoF 1, 2, 3, 4, 15, 16, 59, 100, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, and 130)
9. The 4-inch projectile had to contain at least 19 grams of TNT and some quantity of black powder from the fuze magazine or the projectile cavity. (FoF 123, 124, 125, 126, 127, 128, and 129)
10. The projectile, as it came out of the ground near Building 705 on 4 November 2002, had no rotating band, had a base fuze with no tracer element, had a distinctive flat (dented) area on the edge of the base of the unit, and was 4 inches in diameter. (FoF 70, 117, 119, 120, and 121)
11. The projectile discovered near Building 705 on 4 November 2002 and delivered to the Scrap Yard that same day was the projectile that was involved in the incident

FUSE

on 21 November 2002. (FoF 68, 69, 70, 72, 74, 77, 79, 80, 81, 95, 97, 100, 117, 119, 121, and 122)

12. Lack of training of the 1/2 inch projectile and the 1/2 inch factor in this incident. (1

See Billy Johnson's memo if you need more assistance with this wording. #15

initial characterization of the 4-militarize was not a contributing

## 2.4 EFACHES/NAVFAC

13. The responsibilities for review and quality assurance is assigned to the COTR and NTR without published criteria, i.e. specifications with specific performance tasks, work and deliverables specific to OE removal work processes. (FoF 149 and 151)

14. ~~NAVFAC~~ EFACHES Environmental Engineers and ROICC personnel were not equipped by training, experience or specifications to perform oversight of OE removal. (FoF 151).

15. ~~NAVFAC~~ LANTDIV and EFACHES government COTR, NTR, ROICC personnel were also not equipped to meet demilitarization requirements. (FoF 56 and 152)

contract for contractor personnel to meet.

16. IHD NSWC Contractor Safety and safety procedures requirements outlined in IHDIVNAVSURFWARCENINST 5100.22 are not understood or being followed by the ROICC office. (FoF 44, 46, and 47)

## 2.5 IHD NSWC

17. There is no established policy or guidelines at IHD NSWC for the use of the Explosives Decontamination Tag – Safe (NDW-IHDIVNAVSURFWARCEN 4035/30 (Rev. 3-93)) on MLI type items. (FoF 181)
18. IHD NSWC was disposing of MLI generated scrap through their Quality Recycling Program (QRP). This is in violation of Navy policy. (FoF 35, 37, 50, 184, and 194)
19. IHDIVNAVSURFWARCENINST 8020.4, Regulations Governing Receipt and Disposal of Decontaminated Scrap Materials Processed Through the Property Disposal Office, is seriously deficient. The instruction has not implemented the requirements of the interim policy of DoD 4160.21-M, Chapter 4, paragraph B3 (specifically, content, dual signatures for certification and verification, material segregation, personnel qualification requirements) and demilitarization certification requirement of DoD 4160.21-M-1, nor the tagging and identification requirements of OP-5, 2-1.14.7. (FoF 54, 184, 185, 186, and 193)
20. The decontamination tag used by IHD NSWC, Safe (NDW-IHDIVNAVSURFWARCEN 4035/30 (Rev 3-93)) is not equivalent to DD Form 2271. (FoF 181, 195)

21. The pre-construction meeting held on 12 November 2002 for Site 41 OE removal did not meet IHD NSWC requirements. Emergency response information was not presented to the contractor and record of meeting is difficult to understand. (It is hard to determine what was discussed at pre-construction meeting.) (FoF 43, 44, 45, 144, and 146)
22. The UXO Support plan was in conflict with DoD regulations. The government reviews, although accomplished, did not recognize deficiencies within the plan. (FoF 169, 170, 171, 172, and 174)
23. Shaw E&I employees were performing OE removal which included operations with explosive-contaminated items; therefore, making this by definition an explosive operation requiring individuals to be certified to NAVSEAINST 8020.9. Shaw E&I employees were in fact not certified through IHD NSWC's Qualification/Certification Program. (FoF 179 and 180)

## **2.6 Emergency Response**

24. Although the time to respond to accident scene by the IHD NSWC emergency response personnel was less than 5 minutes, there was delay caused by confusion as to the proper emergency response telephone numbers by contractor personnel. Contractor personnel relayed the request for emergency medical support to another project site. Personnel in Building 436 instead of contractor personnel performed the notification of the Fire Department. (FoF 5, 6, and 8)
25. The procedure for the exchange of specific emergency response procedures to contractor personnel during the pre-construction meeting was deficient and established procedures were not being followed. (FoF 44)

## **2.7 Documentation**

26. The requirements for demilitarization certification do not adequately address when demilitarization is required and need clarification. (FoF 198 and 199)

## SECTION 3.0 RECOMMENDATIONS

### IHD NSW

1. That a team be established to **develop policy and procedures** for:
  - a. **Decontamination tagging and labeling** (implementation of DD Form 2271 requirements and labeling (Xs and O)) including comparative evaluation of IHDIVNAVSURFWARCEN 4035/5 tag and DD Form 2271
  - b. **Segregation of materials** (ordnance (demilitarized and non-demilitarized), non-ordnance (contaminated and non-contaminated)) to ensure traceability and integrity of certified materials to include tracking and control from generators to disposal
  - c. **Integration of demilitarization requirements** (research demilitarization policies to determine when certification is required). Define personnel requiring demilitarization training.
  - d. **Integration of decontamination terminology** (5X, 3X, 1X, O instead of empty, inert, green, red) throughout relevant documents
  - e. **Ensure decontamination** (heat-treating, chemical treatment, etc.) **is accomplished prior to demilitarization**. If level of contamination is unknown, then it must be assumed to be at least 3X contamination
  - f. **Training and qualification** requirements for personnel in decontamination and demilitarization of materials, including plant movement of contaminated materials. Chapter 10 of IHDIVNAVSURFW
2. That **appropriate IHD NSW Instructions are updated** to implement (for example 4570.2):
  - a. Interim policy of DoD 4160.21-M, Chapter 4, paragraph B3
  - b. NAVSEA OP5 paragraph 2-1.14.7 (Labeling and Tagging)
  - c. Demilitarization certification requirements of DoD 4160.21-M-1
  - d. DoD 5160.65-M, Chapter 11, Section C (Decontamination Procedures)
  - e. Policy and procedures developed from Recommendation 1
  - f. Recommendations 3 and 18
3. That policy be established that makes it **mandatory** that ordnance materials be **5X level contamination and demilitarized prior to turn-in to Supply Department** and that it is demilitarized in accordance with Recommendation 18.
4. That Capital Purchase Program (CPP) or other alternate **funds are made available to upgrade IWP and support facilities** to enable demilitarization capability to support Recommendations 2, 3, and 18. Department 20 shall champion the CPP project to upgrade the IWP and support facilities.

are developed which prohibit comingling of contaminated ordnance with scrap metals.



5. That Safety Department **review the current process for review and approval of contractor's submittals** pertaining to OSH and explosive safety to better ensure compliance with relevant safety rules and to implement a system for tracking and documenting comments, recommendations, and approvals. Formalize process in the Safety Manual.
6. That Safety Department **review current content of Activity safety and emergency response information for contractors** performing work at the Activity. **Establish a structured approach to ensure site-specific requirements are presented and documented** (fire box location map and map showing relative location of work site, etc.). **Develop videos and/or other methods to minimize attendance issues** at pre-construction meetings. Formalize process in Chapter 13 of Safety Manual as required.
7. That Safety Department **review and update Chapter 13** requirements pertaining to Investigation Report Form, NDW 5100/10, (Appendix 13-B) and issue receipt of Summary Contractor and Safety Requirements for All Maintenance, Repair, or Construction (Appendix 13-A). **Review with ROICC at IHD NSWG to develop** an overall **improved methodology** to ensure compliance.
8. That Safety Department **review and update current RRRP instruction** (IHDIVNAVSURFWARCENINST 5090.7) to include and clarify which materials can be sold via the QRP and those that must be sold exclusively through DRMO.
9. That Supply Department **review current metal scrap disposal practices at other activities to develop the best practice for establishing a "DRMO support" process** to effectively dispose of scrap metal and other items. Process should ensure timely removal of scrap metals to avoid excessive accumulation of material.
10. That Supply Department **incorporate the use of DRMO** as required.
11. That Safety Department **review and revise current policy** (paragraph 4.8.f.(10) of IHDIVNAVSURFWARCENINST 5100.22) **pertaining to "Buried or Discovered Live or Unknown Munitions"** to ensure item is positively identified, EOD technicians are used as necessary, and item, if found not to contain any visible energetic material or components, is labeled as 3X, tagged, heat treated, and demilitarized as required.
12. That departments **ensure that personnel identified** from Recommendation 1.c. **obtain demilitarization training**.
13. That the Safety Department **include demilitarization training requirement** in qualification section of IHDIVNAVSURFWARCENINST 8020.5, **Qualification / Certification Program**.

14. That Safety Department ***develop training and present*** to appropriate Activity personnel once ***new policies and procedures*** are established (Recommendations 1 and 2) covering:

- a. Contamination terminology (Xs and O)
- b. Tagging and Labeling
- c. Certification of Decontamination and Demilitarization Requirements and philosophy
- d. Segregation of materials unearthed, discovered ordnance procedures

Training material shall be presented in next Safety Standdown.

15. That Safety Department ***establish and define training and qualification requirements for personnel approved to certify and verify decontamination and demilitarization*** and establish requirement in IHDIVNAVSURFWARCENINST 8020.5.
16. That Safety Department ***establish and define*** in IHDIVNAVSURFWARCENINST 8020.4, Submission, Revision, and Maintenance of Standard Operating Procedures (SOP), ***procedures for approval and use of contractor generated SOPs***.
17. That Safety Department ***establish guidelines and policy*** in the Safety Manual that provide clear ***contamination determination procedures***.
18. That Safety Department ***establish Activity demilitarization requirements that mandate all ordnance items*** after having undergone destructive demilitarization ***no longer look like an ordnance item*** requiring the following:
- a. Longitudinal or radial destruction to ensure that all cavities are exposed or
  - b. Total crushing, shredding, or melting

Once requirements are established, departments need to integrate into Activity procedures and instruction(s).

19. That Safety Department ***review and modify qualification/certification procedures addressing contractor personnel certification requirements to ensure certification is accomplished for personnel performing explosive work on NAVFAC contracts***.
20. That Safety Department ***establish policies and procedures to ensure proper characterization of work*** (explosive versus environmental) ***and the involvement of appropriate organizations throughout all phases of the work*** (planning, design, execution, etc.).

make munitions

- available to  
contractors  
executing  
OE munition  
work.

LAND DIV

- W/FAGS QAT

~~#282.~~

29. That NA  
require  
submitta  
resubmitt.

30. That NAV  
resources  
~~identified~~

31. That NA  
guidanc  
person  
perform

32. That EF  
and act  
WORK item

33. That EFACHES **provide the funding for acquiring review of revised contractor OE submittals by DOD or Navy ordnance resources, for restart of Task 0077.**

#32.  
EFACHES Commanding Officer  
designate personnel  
authorized to perform  
design, Real estate, acquisition  
and perform contract oversight  
on work having potential  
OE, UXO and munitions.

develop contract  
of OE  
period,

Identify OE DOD and Navy  
submittals. ordnance  
Resources.

provide policy  
QA inspection  
for

is identifying personnel  
evaluation  
SCOPE authorized to

### Restart Recommendation:

That IHD NSWC Department 20 shall assume responsibility for surface OE removal at Site 41. Activity resources (IHD NSWC and current decontamination contracted personnel) will follow the same procedures and methodology used to remove OE items from Caffee Road Thermal Treatment Point during 2001. Materials will be heat-treated, certified as 5X, and MLI turned over to Shaw E&I for demilitarization.

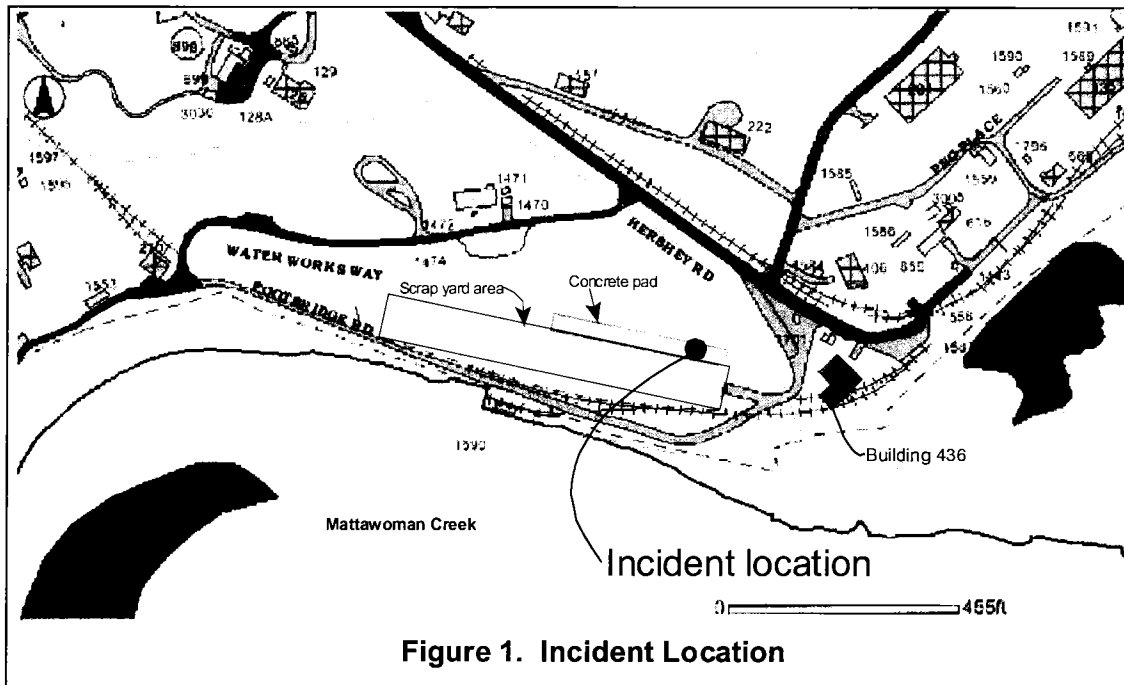
That EFA CHES modify the contract to only include the demilitarization and site remediation as originally planned. IHD NSWC will retain oversight and maintain presence to address any OE discovered during the site remediation.

## SECTION 4.0 FINDINGS OF FACT

### Chapter 1 Explosive Incident

#### 1.1 Event

1. During the time frame of 1405 to 1409 hours on 21 November 2002, an explosive incident occurred in Scrap Yard, Site 41 at the Indian Head Division, Naval Surface Warfare Center (IHD NSWC), Indian Head, Maryland. Figure 1. (Enclosures (1) and (2).)
2. Personnel in Building 436, approximately 100 yards away, stated windows rattled and there was a loud noise. Figure 1. (Enclosure (2, J. Anderson and B. Cockerham).)



3. Personnel at or near the scene stated they heard a loud noise and saw black smoke and a flame. (Enclosure (2, V. Plummer, D. Anderson, A. Grant, and R. Johnson).)
4. The explosion was a single event; duration was less than 1 second. (Enclosure (2, D. Anderson).)

## 1.2 Emergency Response

5. IHD NSWC Personnel in Building 436 notified the IHD NSWC Fire Department of the explosive incident at 1410 hours on 21 November 2002. (Enclosures (1) and (2, B. Cockerham).)
6. A Shaw E&I individual on scene contacted Charles County emergency services via 911-call instead of using emergency response procedures in the Draft Work Plan. When personnel arrived from Building 436, he asked them for the location of the Scrap Yard. (Enclosures (1), (2, A. Caris and J. Anderson), and (11).)
7. Not used.
8. IHD NSWC Emergency Response Personnel arrived on scene 4 minutes after receiving call (Enclosure (1).)
9. Al Grant, a Shaw E&I employee, was treated by IHD NSWC Emergency Medical Technicians (EMTs) on-site and then was transported via ambulance to Fort Washington Hospital, Fort Washington, MD. (Enclosures (1) and (2, D. Anderson, A. Grant).)
10. Steve Jackson had severe damage to lower left leg, a through puncture in left hand, cut on neck, and multiple puncture wounds. (Enclosure (2), D. Pringle).)
11. Steve Jackson was stabilized in the Emergency Room at Civista Medical Center, LaPlata, MD and then transferred to Washington Hospital Center (MedSTAR), Washington, DC. (Enclosure (1).)
12. Al Grant, a Shaw E&I employee, had minor lacerations due to shrapnel in the face and loss of hearing (Enclosure (2, A. Grant).
13. Not used.
14. No other personnel received emergency response on-site medical treatment as a result of the incident. (Enclosure (1).)

### 1.3 Damage

15. The Petrogen handheld torch was damaged (Figure 2). Steve Jackson's clothing and protective equipment including protective face shield were destroyed. (Enclosure (29).)
16. The area near the point of the explosion had no visual damage (no craters or damage to concrete surface). (Enclosure (6).)
17. Not used.
18. Not used.
19. Not used.
20. Not used.



Figure 2. Torch Damage

## Chapter 2 Ordnance and Explosive (OE) Removal Effort

### 2.1 Background

21. The work being performed on OE items as part of a contract contains a scrap yard and materials for future disposal, 100 feet long by 75 feet wide. *#24* The Task Order 077 did not incorporate contract performance specifications or DFAR requirements [252.223.3(a), 252.223-7002; 252.223-7003] nor DOD regulations (4145 *#24*; 4160-21-M-1; 5025. *#24*
22. The remediation work was performed by Services Corporation (Action Contract (RAC) Task Order 077. The FDOT contaminated that area. Order 077 was for the removal of surface OE at the site. *#24*
23. Contract N62470-97-R was awarded to Chesapeake through the removal of surface OE at Site 41/Scrap Yard. (Enclosure (61).)
24. The original Task Order 077 and Mods 1 through 3 did not address the removal of surface OE at Site 41/Scrap Yard. (Enclosure (61).)
25. Technical Directive TD-001 for Site 41 submitted by Shaw E&I to EFACHES Resident Officer In Charge of Construction (ROICC) at IHD NSWC on 01 November 2002 was Shaw E&I's request for a modification to address the removal of surface OE. (Enclosures (60) and (79).)
26. The TD-001, signed 12 November 2002, was used to authorize the initiation of the OE removal work at the Scrap Yard. (Enclosure (60).) *perceived direction to the Contractor from the government*
27. IHD before of n proc at S *#26* *Henry utilize #26* *Feb. William Johnson's 1. one. Comments on the #3* *in his memo* *2 second bullet* *#26* *1) and zation*



## 2.2 Roles and Respo

### Government

28. The Atlantic Divisio  
N62470-97-D-50

29. The Engineering  
Engineering Cor  
(Enclosure (2, S

30. The Naval Facili  
Construction (R  
oversight respo

31. The primary qu  
Order 077, TD-  
(RPM)/Navy Tr  
(70).)

32. The Contractir  
Division, Nave

33. The assigned  
Division of the

34. The IHD NSW  
environment;  
documents (Work Plan and OAC Support...  
issuing work permits and presenting IHD NSW's safety program requirements at  
pre-construction meeting. (Enclosures (2, S. Jorgensen), (13), (14), (15), (64), (74,  
Chapters 1 and 13), (79), and (80).)

35. IHD NSW Supply Department, Code 11 had operational responsibility for the  
Scrap Yard prior to OE removal efforts and was responsible for disposal of scrap  
metal resulting from the OE removal by Shaw E&I. (Enclosures (2, J. Minter) and  
(79).)

### Non-Government

36. Shaw E&I was responsible for the actual site remediation including the OE removal  
and demilitarization that was required. (Enclosures (7), (8), and (11).)

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37. Joseph Smith & Sons, Incorporated was the scrap metal contractor that received the scrap metal generated from the OE removal effort. (Enclosure (2, J. Minter), (69), and (71).)

### **2.3 Shaw E&I Work Controlling Documents and Verbal Agreements**

38. UXO Support Plan, Project Number 831866, dated October 25, 2002 was the site-specific operating document used by Shaw E&I to perform the OE removal. The Plan states that Attachment A, UXO Related Scrap Metal Collection, Inspection, and Demilitarization Procedure and Attachment B, UXO Transportation Procedures, are the standard operating procedures (SOPs) for performing the operations and were included to incorporate the guidance and requirements of NAVSEAINST 8023.11 and NAVSEA OP 5. (Enclosure (8).)
39. The Work Plan for Site 41 Remediation was not approved by the government prior to the OE removal; therefore, an unsigned draft plan was used as the general work governing document. It included the quality control plan and the site-specific safety and health plan (activity hazard analysis, emergency response plan, material safety data sheets) and described the tasks to be performed during the OE removal activities at the Scrap Yard used by Shaw E&I. (Enclosures (10), (11), and (79).)
40. Not used
41. The work permit dated 12 November 2002 and hot work permits dated 13 November and 18 November 2002 were issued by IHD NSW Safety Department to allow work operations and hot work to be done by Shaw E&I at the Scrap Yard. (Enclosures (13) and (14).)
42. There was a verbal discussion between Al Grant, Shaw E&I, and Joseph Smith and Sons, Incorporated regarding the scrap. The scrap contractor wanted all items cut so they did not resemble an ordnance item. This requirement established the criteria used by Shaw E&I in their cutting process. (Enclosure (2, A. Grant) and (16).)

### **2.4 Status of Work**

43. A pre-construction meeting was held on 12 November 2002 at IHD NSW with EFACHES ROICC at IHD NSW, Shaw E&I personnel to discuss safety procedures, emergency procedures, and overall task execution. Information was provided verbally and in writing. (Enclosures (2, F. James, D. Bode, and N. Moore) and (15).)
44. The Law Enforcement representative and the Fire Protection Division inspector were not in attendance at pre-construction meeting held on 12 November 2002. (Enclosure (15).)

45. The Fire Department is responsible for presenting emergency response procedures at the pre-construction meeting. (Enclosure (2, N. Moore) and Enclosure (74).)
46. The EFACHES (ROICC) at IHD NSWC was not aware that by IHDIVNAVSURFWARCENINST 5100.22G they were required to provide each contractor of a copy of investigation report form Appendix 13-B at the pre-performance (pre-construction) meeting and the requirement that it be submitted within 2 working days of an incident. (Enclosure (2, R. Hime, C. Jarvis, and C. Gardner).)
47. IHDIVNAVSURFWARCENINST 5100.22G requires that solicitations shall include a copy of Appendix 13-A and receipt acknowledged by contractor. ROICC office was not aware of this requirement. (Enclosure (2, R. Hime, C. Jarvis, and C. Gardner).)
48. Startup of OE removal operations at Scrap Yard by Shaw E&I began on 12 November. The lock on the gate at the entrance to Scrap Yard was changed from IHDIV lock to a Shaw E&I lock. (Enclosures (2, D. Bedell) and (16).)
49. From 13 to 21 November 2002 approximately 231 OE items had been processed (cut) for disposal. (Enclosure (16).)
50. One roll-off dumpster filled with scrap metal generated from the OE removal effort was released to Joseph Smith & Sons, Incorporated on 21 November 2002. (Enclosures (2, J. Minter), (69), and (71).)
51. A DD Form 1348-1, serving as the Disposal Turn In Document (DTID), was used to certify the dumpster of scrap metal by Shaw E&I for turnover to IHD NSWC. (Enclosures (17) and (79).)
52. Al Grant, Shaw E&I employee, signed the DD Form 1348-1 attesting that the items were demilitarized in accordance with DoD 4160-M-1 and the items contain nothing of a hazardous or dangerous nature. (Enclosure (17).)
53. The DD Form 1348-1 did not meet the requirements of AEDA and Range Residue Interim Policy (DoD 4160.21-M, Defense Demilitarization Manual, Chapter 4, Paragraph B 3.) specifically for proper certification format and content. (Enclosures (17) and (51).)
54. The AEDA **inert certification** for the material in the roll-off dumpster was not done in accordance with DoD 4160.21-M, AEDA and Range Residue Interim Policy (DoD 4160.21-M, Chapter 4, Paragraph B 3 a.(8).) and IHDIVNAVSURFWARCENINST 8020.4 , Regulations Governing Receipt and Disposal of Decontaminated Scrap Materials Processed Through the Property Disposal Office, DoD 4160.21-M-1, specifically:

- a. Al Grant, Shaw E&I employee, was not an approved/authorized individual for certifying AEDA. *add enclosure 76*
  - b. A combined and incorrect certification statement (for demilitarization and inert certification) was used instead of separate statements on the DTID (DD Form 1348-1).
  - c. The DTID did not have printed/typed full names, rank/rate, complete organization name and address, and phone number. (Enclosures (17), (50), (51), and (55).)
55. Al Grant, Shaw E&I Senior UXO Supervisor, who approved acceptable to cut had extensive EOD experience. (Enclosure) *fractile as*
56. The AEDA **demilitarization certification** for the material was not done in accordance with DoD 4160.21-M-1, Manual, specifically: *DDO*
- a. Al Grant, Shaw E&I employee, did not have the authority to demilitarization. He did not have the proper training. (Enclosures (17), (51), and (76).)
  - b. A combined and incorrect certification statement (for demilitarization and inert certification) was used instead of separate statements on the DTID. (Enclosures (17) and (51).)
  - c. The DTID (DD Form 1348-1) did not have a demilitarization code listed. (Enclosures (17), (28), (51), and (55).)
57. Joe Minter, IHD NSW employee, was not authorized per IHDIVNAVSURFWARCENINST 8020.4 to verify and certify AEDA materials as being inert. He did not have the authority to verify and certify demilitarization since he did not have the proper training. (Enclosures (17), (28), and (76).)
58. The scrap metal shipped on 21 November 2002 was given to the scrap dealer without any transfer document or certification stating that the material was safe. (Enclosure (2, J. Minter).)

## 2.5 Equipment Being Used

59. An oxygen-gasoline cutting torch, trade name Petrogen, a plasma torch, and a chop saw was the equipment used to cut the OE. Steve Jackson, Shaw E&I employee, was using a Standard Package Part 100 Petrogen Torch (operating temperature of 5200 degrees Fahrenheit). Figure 3. (Enclosures (16) and (59).)
60. Steve Jackson was wearing a face shield, leather chaps, steel-toed boots, gloves, leather apron, and earplugs. (Enclosures (2, A. Grant) and (29).)
61. Not used.
62. Not used.
63. Not used.
64. Not used.
65. Not used.
66. Not used.
67. Not used.



Figure 3. Torch

## Chapter 3 4-Inch Gun Projectile Involved in Explosion

### 3.1 Discovery

68. A river water shut-off valve was going to be installed near Building 705 at IHD NSW to shut off water to buildings scheduled for future demolition. During digging on 4 November 2002, the contractor discovered an ordnance item and notified the IHD NSW contract representative, Dan Bedell. Figure 4. (Enclosures (2, D. Bedell) and (20).)

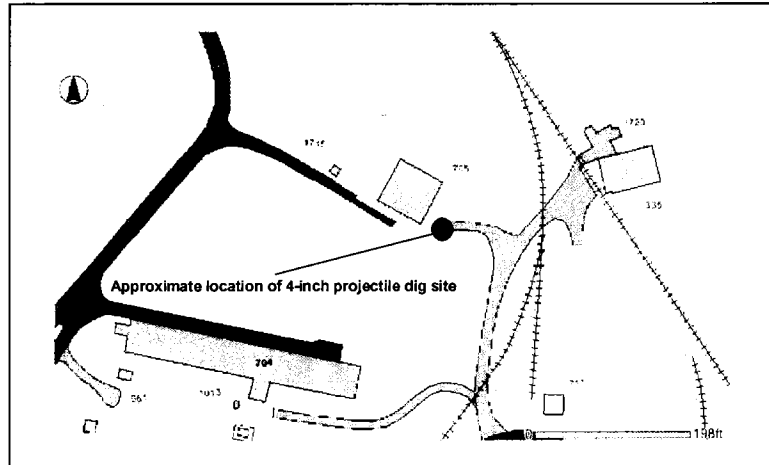


Figure 4. Digging location

69. Dan Bedell called Frank James, IHD NSW Safety Inspector, he responded to inspect the unearthed ordnance item on 4 November 2002. (Enclosure (2, D. Bedell and F. James).)

### 3.2 Initial Identification

70. Frank James performed minor surface cleaning (dirt removal) from the item and made the following determination/conclusions:
- a. The item was a gun projectile caked with soil/dirt and heavily corroded.
  - b. It measured 4 inches in diameter at the base (actual measurement taken).
  - c. There was a recess/grove on the outer circumference of the projectile near the base end.
  - d. There was no nose fuze.
  - e. There were dissimilar colors at the base of the projectile. The center of the base was more brass color than the remainder of the base that was consistent in color with the remainder of the projectile, a rusty-orange-brown.

- f. There was evidence of a depression in the center of the base in brass area of the projectile approximately 1/4-inch in diameter. He probed the hole using a flat blade tool and removed dirt up to a depth of 1/2 of an inch.
- g. The projectile was nose-heavy when he handled it.

Frank James concluded that the projectile was:

- h. A 4-inch Navy gun projectile,
  - i. A concrete-piercing round,
  - j. Missing the rotating band and tracer missing, and inert because the rotating band was missing and the tracer had been removed, indicating to him that it had been demilitarized. (Enclosure (2, F. James).)
71. Per DOD 4160.21-M-1, Defense Demilitarization Manual, this 4-inch projectile requires removal and complete destruction of the fuze, removal of explosive-filler and rotating band, and deformity of fuze cavity threads to be demilitarized. (Enclosure (51).)
72. Frank James filled out an Explosives Decontamination Tag – Safe (NDW-IHDI VNAVSURFWARCEN 4035/30 (Rev. 3-93)) (Green Tag) identifying the item as 4" Projectile (empty) on 4 November 2002. (Enclosure (2, F. James) and (21).)
73. Frank James had extensive EOD experience and ordnance training. (Enclosure (9).)
74. Frank James gave the decontamination tag to Calvin Cobey, IHD NSWC Supply Technician, at the time the 4-inch projectile was delivered to the Scrap Yard on 4 November 2002. Frank James placed the projectile in the scrap yard by the front gate on top of the concrete wall. (Enclosure (2, F. James and C. Cobey) and Enclosure (21).)
75. Frank James did not perform any additional analysis to further identify the projectile. (Enclosure (2, F. James).)

### **3.3 12-inch Gun Projectile**

76. A 12-inch Gun Projectile was discovered partially buried at IHD NSWC in October 2002. The projectile was deemed inert, green tagged by F. James, and placed in the Scrap Yard on 29 October 2002. (Enclosures (2, F. James) and (18).)

### **3.4 Physical Location**

77. On or about 7 November 2002, Calvin Cobey gave the transportation support services contractor the 4-inch projectile instead of the 12-inch projectile at the Scrap Yard and transported it to Building 1134 for cleaning to preserve as a display item. (Enclosure (2, C. Cobey and F. James) and (24).)
78. Building 1134 personnel were told the projectile was inert; the Decontamination/Green Tag was not transported with the projectile nor was it marked as inert, the Decontaminated/Green Tag remained at the Property Disposal Office. (Enclosure (2, C. Ford and C. Cobey).)
79. A projectile was plastic media sandblasted by Curtis Ford, IHD NSW Applied Technology Department employee in Building 1134. (Enclosure (2, C. Ford).)
80. Frank James stopped by Building 1134 to check on the 12-inch projectile and discovered the wrong projectile had been cleaned and returned the 4-inch projectile to the Scrap Yard on 14 November 2002. He placed the projectile at the same location as he had placed it on 4 November 2002. (Enclosure (2, F. James).)

### **3.5 Shaw Identification of Projectile**

81. Deb Anderson and Al Grant (Shaw E&I employees) saw Frank James place a silver/gray projectile on the edge of the concrete wall beside the compressed gas cylinders. (Enclosure (2, D. Anderson and A. Grant).)
82. Deb Anderson, Bruce Tincknell, and Al Grant (Shaw E&I UXO personnel) assessed that the 4-inch projectile brought by Frank James was a U.S. Army solid-steel armor-piercing 90mm projectile. (Enclosure (2, D. Anderson and A. Grant).)
83. Not used.
84. Not used.
85. Not used.
86. Not used.
87. Not used.
88. Not used.
89. Not used.
90. Not used.



## Chapter 4 21 November 2002 Events/Conditions at the Scrap Yard

### 4.1 Morning

91. There were multiple non-routine events (QC meeting, walk-through) that took place in which Al Grant, the Senior UXO Supervisor, and other Shaw E&I personnel were involved. (Enclosure (77), Enclosure (2, J. Morris).)

### 4.2 After Lunch Break

92. A total of ten people were in the scrap yard when the incident occurred. The people present during the incident, their locations and job titles are presented in Figure 5. (Enclosure (2, B. Ticknell, D. Anderson, A. Grant, E. Duke, D. Gardner, R. Johnson, M. Campbell, L. Mahiques, and G. M. Coker).)

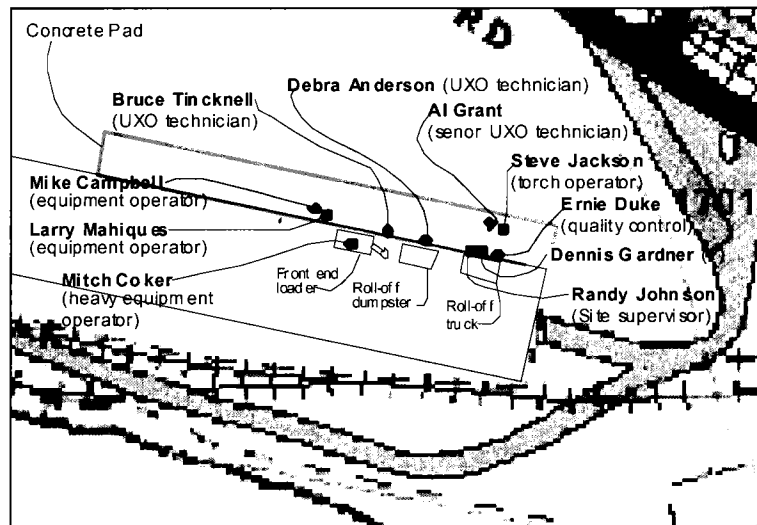
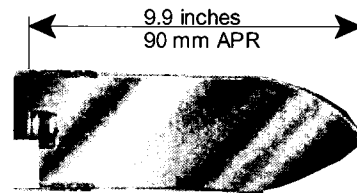


Figure 5. Personnel locations at the time of the Incident

93. A roll off dumpster was being loaded with the scrap metal that had been generated from the OE processing. (Enclosure (2, A. Grant).)
94. Al Grant was directing Deb Anderson, Mitch Coker, and Bruce Tincknell on procedures to screen the materials going into the dumpster (first time a dumpster had been loaded); providing items for demilitarization to Steve Jackson, Mike Campbell, and Larry Mahiques; and processing certification paperwork for the scrap metal being loaded into the dumpster. (Enclosure (2, A. Grant).)
- ### 4.3 Actions Involving 4-inch projectile
95. The 4-inch projectile had not been relocated since Frank James had placed it in the Scrap Yard on 14 November 2002; it had not been segregated into one of the following areas as defined by the UXO Support Plan: Non-OE, Inert OE, Potentially Live – Safe to Move OE, and Potentially Live – Unsafe to Move OE. (Enclosure (2, A. Grant).)
96. Steve Jackson had returned from lunch and was waiting for an item to cut. (Enclosure (2, A. Grant).)

97. Al Grant, Senior UXO Supervisor, inspected and selected the “cleaned projectile” that had been delivered to the Scrap Yard by Frank James on 14 November 2002. As a result of the inspection, he determined that the projectile was a demilitarized Army 90mm solid steel armor piercing-traced (AP-T) round. He stated that he had previously worked at a site involving 90mm rounds.

There was no recollection of spanner holes in the base end of the projectile indicating to him that there was no base fuze, only an empty tracer cavity. As a result of this assessment, he concluded it was safe to cut. (Enclosure 2, A. Grant.)



98. The 90 mm projectile (without windscreen) is 9.9 inches long and 3.5 inches in diameter; the 4-inch projectile is 15.8 inches long and 4 inches in diameter. Figure 6. (Enclosures (43) and (86).)

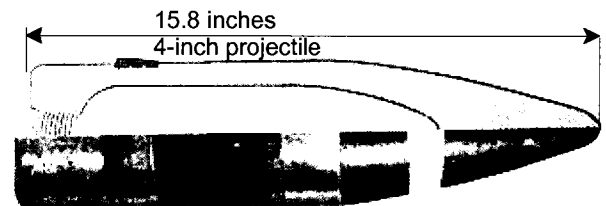


Figure 6. Size comparison of the 90mm and the 4-inch

99. The UXO Support Plan requires 3 levels of inspection prior to an OE item being cut. The 4-inch projectile involved in the incident only received 1 level of inspection. The projectile was not marked in accordance with the Activity Hazard Analysis that was presented on 12 November 2002 at their safety meeting. (Enclosures (2, A. Grant), (8), (16), and (59).)
100. Al Grant moved the projectile to the cutting location and placed it horizontally on the concrete surface with the nose end pointing toward the gate of the Scrap Yard. Steve Jackson began cutting the “silver/gray” projectile with the Petrogen torch. The torch flame was directed at the intersection of the sidewall and the base of the projectile and the explosion occurred approximately 1 to 2 minutes after first application of the flame to the projectile. (Enclosures (2, A. Grant), (37), and (59).)
101. The Petrogen torch functioned normally while cutting of the 4-inch projectile. (Enclosure (59).)
102. Not used.                      107. Not used
103. Not used.                      108. Not used
104. Not used.                      109. Not used
105. Not used.                      110. Not used
106. Not used.

## Chapter 5 Probable Cause Determination

### 5.1 Evidence Collection

111. Two large projectile fragments were initially located near victim, but were moved to the corner of the concrete pad to allow emergency personnel access to the victim. Figure 7. (Enclosure (2, A. Grant).)

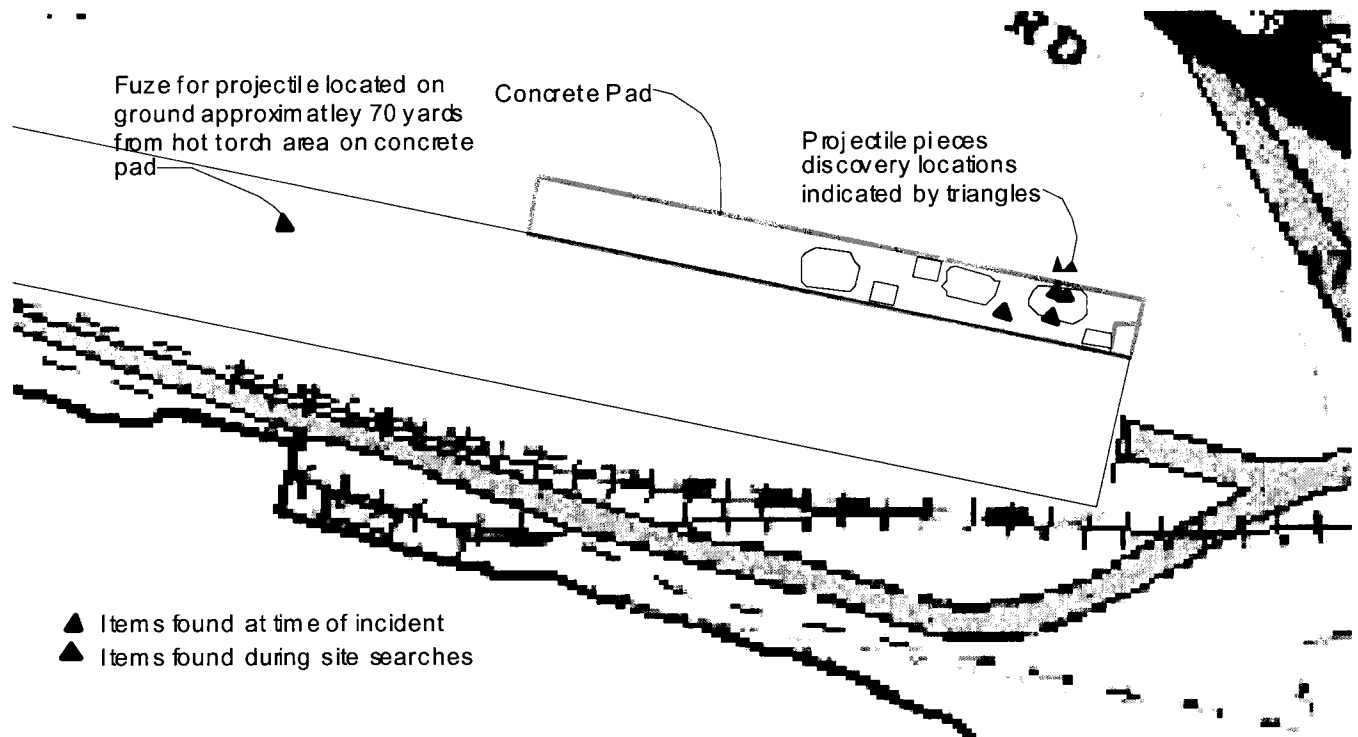


Figure 7. Fuze and fragments discovery locations

112. Two fragments (approximately 1 ½ x 2 inches and 2 ½ x 2 inches) were removed by EMTs from his clothing and transported with the victim, Steve Jackson, to the hospital. (Enclosures (2, A. Grant) and (31).)
113. During initial search of accident scene, items were collected, cataloged and secured by the Chemical Laboratory, IHD NSW personnel for evaluation and testing. (Enclosure (58).)
114. An additional search was performed to recover fragments and items generated from the explosion. The search located additional items that were cataloged and secured. (Enclosure (58).)

## 5.2 Laboratory Testing and Analyses

### 5.2.1 Visual and Dimensional Analyses (of collected evidence including Base Ignition Fuze and metal fragments)

115. The Base Ignition Fuze was dimensionally checked and it measured 3.74 inches in length and ranged in diameter from 1.26 to 1.42 inches in diameter (body). (Enclosure (58).)

116. The Base Ignition Fuze was x-rayed and results depicted in Figure 8 and described below:

- a. The firing pin was not in the vertical position or pointing towards the primer at the magazine end.
- b. Magazine end primer was still present with anvil in place.
- c. The "tracer" cavity was empty and does not continue all the way to the output end of the fuze.
- d. The striker carrier has a curved interface with the firing pin consistent with the Mod 4. (Enclosure (58).)

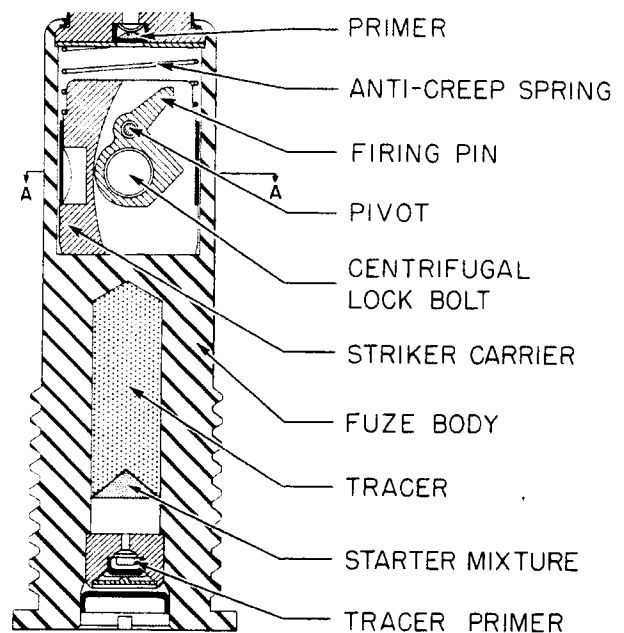


Figure 8. Base ignition fuze

117. Visual examination of the Base Ignition Fuze indicated the following as shown in Figures 9, 10, and 11:

- a. The fuze's head contained spanner slots.
- b. The cavity (tracer) was empty except for dirt residue at the forward end.

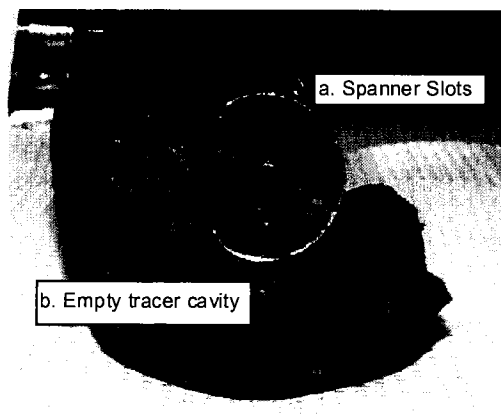


Figure 9. Spanner slots and tracer cavity

- c. The forward end of the fuze was open and a flat surface with a small hole in the middle was visible.
- d. Fuze head was out-of-round; it was flat on one side.
- e. The fuze was brass colored.
- f. The fuze features a tracer cavity, physically separated from the remainder of the fuze.
- g. The forward end of the fuze was mushroom-shaped. (Enclosure (37).)



Figure 10. Front end of fuze

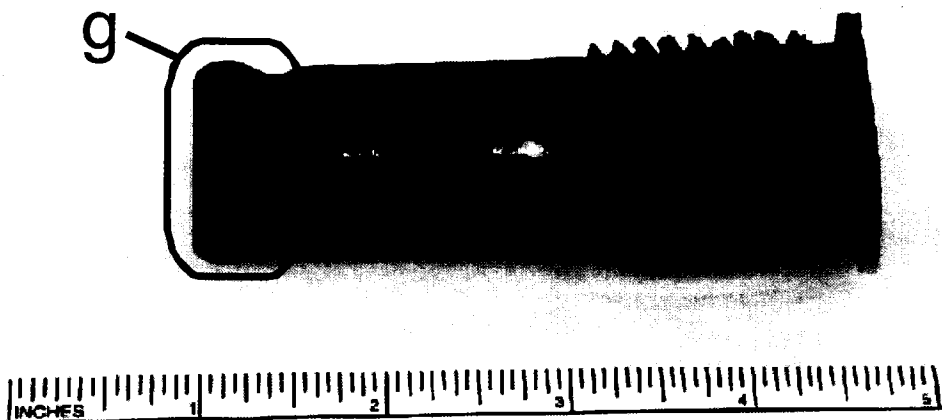


Figure 11. Mushroom-shaped area

118. Upon disassembly, it was determined that the primer's initiation material was no longer present and the primer case showed discoloration. (Enclosure (58).)
119. The Base Ignition Fuze threads mated to the threads of the fuze well of the base fragment. The distorted features of the Base Ignition Fuze corresponded to the distorted features of the base fragment. Figure 12. (Enclosure (58).)



Figure 12. Fuze in base fragment

120. Visual examination of the projectile fragments (Figures 13, 14, and 15) indicated the following:

a. The base fragment contained an external groove (rotating band location) that was empty and the surface characteristics of the metal in the groove were consistent with the remainder of the fragment.

b. There was a flat section on the curvature of the base fragment; the surface characteristics were the same as the remainder of the fragment.

c. The internal surface of the base fragment had indications of black and orange/brown residue.

d. The base fragment has distorted internal threads consistent with external flat section.

e. The base fragment has an area near the threads that is smooth and shows material "melting."

f. The nose fragment has a smooth curved surface on the inside of the fragment at the opposite end from the nose end. (Enclosure (40).)

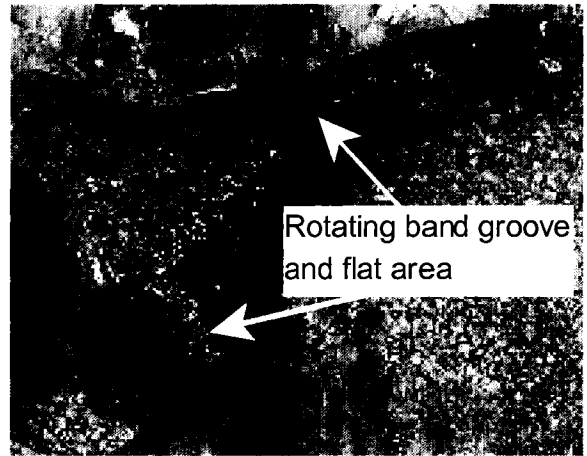


Figure 13. Base fragment

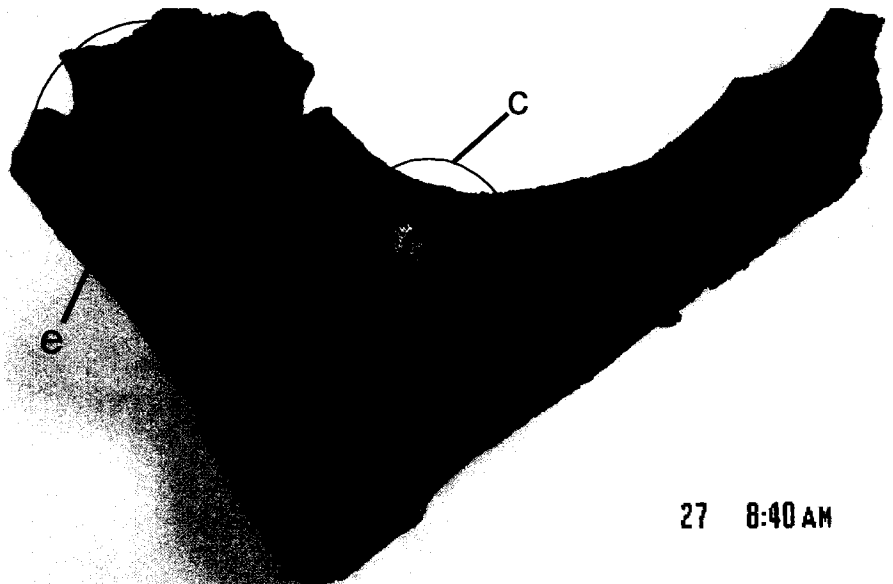


Figure 14. Base fragment showing melting and residue

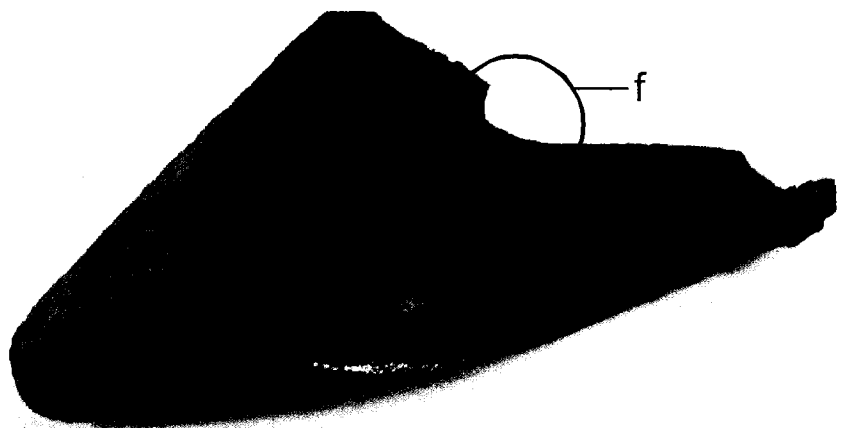


Figure 15. Nose Fragment

121. Dimensional checks of metal fragments determined the following:

- a. The base fragment's curvature translates to a 4-inch diameter item.
- b. The external groove on the base fragment measures 2.75 inches from the end of the fragment. (Enclosure (58).)

### **5.2.2 Laboratory Analyses**

122. Evidence was subjected to laboratory analyses, the following was found:

- a. Under magnification and illumination, discrete deposits of materials were observed on several of the fragments from the torch operator's face shield. Laboratory analysis of these deposits using 3 different analytical methods, identified deposits as TNT.
- b. Deposits of materials on metal fragments collected on the scene tested positive for TNT.
- c. Face shield and metal fragments were analyzed for sulfur and potassium, constituents of Black Powder. Sulfur and potassium were detected indicating the presence of Black Powder.
- d. Fragments were examined by Scanning Electron Microscopy (SEM) and areas containing apparent deposits of material were further subjected to elemental analysis by Electron Dispersive Spectroscopy (EDS). A piece of material attached to one of the metal fragments was identified as human bone. (Enclosure (58).)

### **5.3 Characteristics of TNT, Black Powder, and Explosive Reaction Types**

123. TNT under heating will melt at 82 degrees Celsius (179 degrees Fahrenheit) and decompose explosively at 240 degrees Celsius (464 degrees Fahrenheit). Under confinement, as in slow cook-off, an overpressure burst will occur at a lower temperature of 190 degrees Celsius (374 degrees Fahrenheit). The critical pressure, that is the pressure needed to cause TNT to detonate, is 22.3 giga Pascal or over 3,000,000 pounds per square inch. (Enclosure (85).)
124. Black Powder has a range of ignition temperatures between 260 and 280 degrees Celsius (500-536 degrees Fahrenheit) depending on the exact composition of Black Powder. (Enclosure (85).)
125. Explosive reaction types are defined in MIL-STD-2105B as: Type I (Detonation Reaction), Type II (Partial Detonation Reaction), Type III (Explosion Reaction), Type IV (Deflagration Reaction), and Type V (Burning Reaction). (Enclosure (19).)

#### 5.4 Metal/Projectile Failure Analysis

126. A Von Mises stress analysis calculated that this projectile would require an internal pressure of 7400 psi to induce metal failure. (Enclosure (83).)
127. With an internal volume of a 4" Common MK 10, 19 grams (0.042 lbs) of TNT would be required to generate enough pressure to cause case rupture. This represents 2.8% by weight of the original TNT fill of 1.39 pounds. (Enclosure (84).)
128. If the internal cavity of the 4-inch projectile had been empty, an internal pressure of 155 psi would be expected if the air were heated to 5200 degrees Fahrenheit (the temperature of the flame of the Petrogen cutting torch). (Enclosure (84).)
129. With an internal volume of a 4" Common Mk 10, 61 grams (0.13 lbs) of Black Powder would be required to generate enough pressure to cause case rupture. This is significantly more Black Powder than would have originally been in the Base Ignition Fuze Black Powder Magazine.

#### 5.5 Documentation Search

130. NAVSEA OP 1664 Volume 1, Change 1 dated 15 January 1969 was used as the primary reference document used to help identify the projectile that was involved in the incident. The significant characteristics of a 4-inch Common Mk 10 projectile with a Mk 10 Mod 4 Base Ignition Fuze are defined in OP 1664 as:
  - a. A 4-inch diameter, solid steel nose, internal cavity with a base ignition fuze, and external rotating band.
  - b. Distance of rotating band from base is 2.75 inches.
  - c. Filler is TNT and Black Powder.
  - d. Base Ignition Fuze is 1.05 inches in diameter for the body, 1.40 inches for the head, and 4.12 inches in length.
  - e. Base Ignition Fuze features an integral tracer cavity. Tracer primer and tracer composition are physically separated from the remainder of the fuze. See Figure 7.
  - f. A TNT-filled 4-inch Common Mk 10 Projectile contains a Mk 10 Mod 4 fuze. (Enclosure (43).)
131. Not used.
132. Not used.



133. Not used.

134. Not used.

135. Not used.

136. Not used.

137. Not used.

138. Not used.

139. Not used.

140. Not used.

## Chapter 6 Management Processes

### 6.1 NAVFAC

141. Initial involvement of the EFACHES NSWIC Indian Head ROICC office began on September 2000 for the overall remediation of Site 41. The involvement included site visits with OHM, Shaw E&I, Tetra Tech NUS, Inc. (TtNUS), and IHD NSWIC Code 04 Environmental. (Enclosures (2, C. Jarvis and C. Gardner) and (79).)
142. The ROICC located at IHD NSWIC had an inspector and an engineer assigned to provide quality assurance and contract performance for the OE and remediation efforts. The inspector and engineer had little or no experience with AEDA, decontamination, and demilitarization procedures. The only ordnance training that the engineer had was a UXO Identification and Safety Class commissioned by the Environmental CLEAN Division of NAVFAC Headquarters conducted on 31 July 2002 by Naval Explosive Ordnance Disposal Technical Division (NAVEODTECHDIV) Code 502G and Code 5013L. (Enclosures (2, C. Jarvis and C. Gardner), (49), (70), and (79).)
143. The UXO Identification and Safety Class provided training to the RPMs and environmental personnel in NAVFAC. (Enclosure (2, R. Mach).)
144. The minutes of the pre-construction meeting are difficult to interpret and did not contain or reference written information provided to the contractor by IHD NSWIC Safety Department personnel. (Enclosure 15).)
145. Not used.
146. Not used.
147. ROICC personnel (Carl Jarvis, Supervisory General Engineer and Cathy Gardner, Project Engineer) stated they relied on Shaw E&I to perform the OE removal properly and safely. They felt they did not have the experience or expertise to properly evaluate contract compliance as it pertained to OE. (Enclosure (2, C. Jarvis and C. Gardner).)
148. Not used.
149. Atlantic Division assigned roles and responsibilities for NTR for site 41 remediation, including *incidental* *in soil during remediation* OE removal. The specific duties assigned to the NTR were: review of contract plans, tasks, work, and deliverables. (Enclosure (70).)
150. NAVFAC authorized start of work for the OE removal for Site 41 with no approved Work Plan. Work Plan covering Site 41 operations was approved 27 November 2002. (Enclosures (10), (11), and (27).)

151. COTR and NTR were not provided contract enforcement documents. No specifications specific to this OE removal work process had been issued for delivery order 0077 to RPM and ROICC to utilize during contract oversight/execution. (Enclosure (63), (2 C. Gardner).)

152. The governing DoD instructions 4160.21-m bulletin #99-004 requires specific training for all personnel involved in demilitarization. Enclosure (76).)

Specific TRAINING was not provided to acquisition or Quality Assurance personnel.

153. Not used.

154. N

155. N

156. N

157. N

158. N

159. N

160. N

161. No

162. No

163. No

164. Not used.

165. Not used.

## 6.2 Shaw E&I

166. The UXO Support Plan requires identification of all OE, but does not provide methodology and tools to properly identify the items. (Enclosures (8) and (51).)

167. It was conveyed that positive identification was too time-consuming to accomplish and deemed impractical. (Enclosure (2, A. Grant).)

168. Contractor was removing metal from the Scrap Yard utilizing a roll-off dumpster. The metal being loaded into the dumpster included demilitarized ordnance. This violated the UXO Support Plan that dictated sealed wooden boxes. (Enclosure (8).)

169. The Shaw E&I UXO Support Plan states OE items that have been demilitarized in accordance with DoD 4160.21-M-1 are considered 3X contaminated; if the item demilitarized was a training item and never contained energetic material, then it is considered 5X. (Enclosures (8) and (79).)
170. The UXO Support Plan and OP 5 (2-1.14.7) state that it is not safe for 3X level contaminated materials to be treated or exposed to open flame or high temperature heating devices. (Enclosures (8) and (68).)
171. DODD 5160.65-M, Single Manager of Conventional Ammunition (SMCA), states that items decontaminated to a 3X contamination level shall not be worked on with open flame, high temperature heating devices, or devices that generate heat during use due to friction, rubbing, or cutting. (Enclosure (90).)
172. The UXO Support Plan states that all 3X contaminated material must be heat treated by the Industrial Waste Process (IWP) facility at IHD NSWC and then certified 5X before it can be ready for release from DoD control to a DMRO designated scrap dealer. (Enclosure (8).)
173. The first dumpster of scrap containing materials defined as 3X by the UXO Support Plan was certified as 5X (is entirely safe and may be released for general use) without being heat treated. (Enclosures (2, J. Minter and C. Cobey), (17), and (79).)
174. The UXO Support Plan Attachments A and B submitted to fulfill the requirements of NAVSEAINST 8023.11, Standard Operating Procedures For The Processing of Expendable Ordnance at Navy and Marine Corps Activities, does not comply with content, format, and approval requirements of the instruction. (Enclosure (87).)
175. The UXO Support Plan requires that items determined Potentially Live, But Safe to Move will be moved to a safe holding area. (Enclosure (8).)
176. Al Grant stated that a bucket of 29 Cartridge Actuated Device (CAD) items located within 10 feet of the torch cutting area were Potentially Live, But Safe to Move. He also stated that several 2.75-inch warheads lying on the ground within 10 feet of the torch cutting area were potentially live. (Enclosures (2, A. Grant) and (77).)
177. Items found in Finding of Fact (FoF) 176 required notification of IHD NSWC Safety Department upon discovery and determination. Only ROICC at IHD NSWC was notified. (Enclosures (8) and (77).)
178. NAVSEAINST 8023.11 requires that a contractor performing explosive work at a Navy or Marine Corp facility must use a SOP that meets the requirements of the instruction. (Enclosure (52).)

- 179. NAVSEAINST 8020.9 requires contractor personnel performing explosive operations at a Navy or Marine Corp facility be certified. (Enclosure (34).)
- 180. The qualification/certification records were checked and Shaw E&I personnel were not certified to perform explosive operations. (Enclosure (35).)

### **6.3 IHD NSW**

- 181. IHD NSW uses Explosives Decontamination Tag – Safe (NDW-IHDI VNAVSURFWARCEN 4035/30 (Rev. 3-93) to indicate thorough decontamination of items exposed to pyrotechnics, explosives, and/or propellants (PEP) The green tag represents 5X level contamination, indicating material is inert and ready for public release. (Enclosures (2, N. Moore, M. Olup, and F. James) and (25).)
- 182. Although not stated in any local instruction, it is understood by current IHD NSW Supply and Safety personnel involved with Scrap Yard operations, only material that is green tagged (deemed 5X contamination) is allowed to be placed in the Scrap Yard. (Enclosure (2, C. Cobey, J. Minter, D. Bode, N. Moore, and F. James).)
- 183. IHDI VNAVSURFWARCENINST 4570.2 (Procedures for Disposal or Decontamination of Minutely Propellant, Explosive, or Pyrotechnic (PEP) Contaminated Waste, Scrap Metal, Equipment, Or Other Material), IHDI VNAVSURFWARCENINST 8020.4 (Regulations Governing Receipt and Disposal of Decontaminated Scrap Materials Processed Through The Property Disposal Office) and IHDI VNAVSURFWARCENINST 5090.18 (Scrap Metal Recycling Program) are the local instructions to process and dispose of scrap materials. (Enclosures (2, J. Minter), (3), (55), and (81).)
- 184. The current practice for scrap disposal at IHD NSW is:
  - a. A certification (green tag or DD Form 1348-1) is given to local Property Disposal Office (PDO) personnel (J. Minter, C. Cobey, or D. Bolin).
  - b. Certified Scrap (Military Listed Items (MLI) (demilitarized and non-demilitarized), non-MLI prior contaminated metal, and non-MLI never contaminated) is given to PDO and placed in the Scrap Yard or shipped to scrap metal contractor directly from generation site.
  - c. There is no segregation by type (see paragraph b. above) of scrap coming from generators, in the Scrap Yard or when it is shipped to the scrap metal contractor.
  - d. The traceability of the materials' certification is lost (green tags or DD Form 1348-1 are not affixed to items/containers) when materials are placed in the Scrap Yard.

- e. Items coming from generators are not marked with the level of contamination (Xs and O) per NAVSEA OP 5. There is no time or quantity restrictions imposed on the disposition of materials from generation to disposal.
  - f. The scrap metal is turned over to the scrap contractor via the Activity's Quality Recycling Program (QRP) using a Naval District Washington (NDW) contract.
  - g. The scrap contractor is not furnished any certification or transfer document by the Activity.
  - h. The contractor furnishes the Activity with an invoice at turnover and then supplies a receipt record. (Enclosures (2, J. Minter), (26), (68), (69), and (71).)
185. For the 4-inch projectile, the following violations of Activity policy and governing regulations occurred:
- a. Green tag was not attached going into or out of the Scrap Yard,
  - b. Contamination level was not indicated (XXXXX was not painted on projectile),
  - c. Was commingled with dissimilar metals/materials in Scrap Yard, and
  - d. Went directly to Scrap Yard and bypassed the established screening, decontamination, and demilitarization policy for potentially contaminated materials. (Enclosures (2, C. Cobey, C. Ford, F. James, and J. Minter), (21), (26), (50), (68), and (81).)
186. IHD NSWC personnel (J. Minter, C. Cobey, and D. Bolin) assigned to operate and control access and materials in the scrap yard, have had varying levels of training on recognizing ordnance and its decontamination or demilitarized condition. J. Minter, the supervisor, had Defense Reutilization and Marketing Organization (DRMO) Training 12 years ago. Calvin Cobey, although having ordnance experience as an explosive operator over 10 years ago, had never had any formal DRMO training. Debra Bolin, a Supply Technician, has never had any formal ordnance or DRMO training. (Enclosure (2, J. Minter).)
187. There is no requirement in Chapter 4, paragraph 4.8.f(10) of IHDIVNAVSURFWARCENINST 5100.22 to ensure positive identification and proper disposition of unearthed or discovered ordnance/munitions. (Enclosure (74).)
188. Current IHD NSWC instructions (8020.4, 4570.2, 5100.22, 8023.4, and 8020.5) involving local disposal and training do not address the training requirements

necessary for personnel to certify/verify demilitarization. (Enclosure (50), (55), (56), (74), (75), (76).)

189. Two designation letters authorizing inert certification per IHDIVNAVSURFWARCENINST 8020.4 were found: one at the local PDO office and the other at the IHD NSWC Safety Department. The Safety Department letter is no longer valid, having expired in FY 1997. (Enclosure (28).)
190. IHDIVNAVSURFWARCENINST 4570.2, Procedures for Disposal or Decontamination of Minutely Propellant, Explosive, or Pyrotechnic (PEP) Contaminated Waste, Scrap Metal, Equipment, or Other Material establishes policy and procedures for the processing of contaminated items, including MLI for disposal. (Enclosure (81).)
191. IHDIVNAVSURFWARCENINST 4570.2 does not mandate that materials be separated through the generation or disposal process as required by DoD 4160.21-M. (Enclosures (50) and (81).)
192. IHDIVNAVSURFWARCENINST 8023.4, Submission, Revision, and Maintenance of Standard Operating Procedures (SOP), does not address the procedure (requirement, submission, review, approval, and oversight) for contractor SOPs. (Enclosure (56).)
193. IHDIVNAVSURFWARCENINST 8020.4 does not properly address the requirements of DOD 4160.21-M, paragraph B3 (interim policy). It does not address:
  - a. The requirement for dual signatures for inert certification;
  - b. The certification procedures for demilitarization;
  - c. Format and content for certification;
  - d. Procedures to approve contractor personnel to perform certification. (Enclosures (50) and (55).)
194. OPNAVINST 5090.1B CH2, paragraph 14-3.7 Excluded Materials states that scrap resulting from demilitarization of MLI items cannot be sold through a Qualified Recycling Program (QRP). (Enclosure (30).)
195. DD Form 2271 is the decontaminated tag called out in NAVSEA OP 5 paragraph 2-1.14.6. It states that an equivalent tag maybe used. (Enclosures (32) and (68).)

#### 6.4 Documentation

196. NAVSEA OP-5 paragraph 13-15 states that cavities of items for sale shall be open and thoroughly inspected. Inert loaded items shall be completely disassembled. All tracer composition, if present, shall be removed prior to sale or other disposition of inert loaded ammunition as scrap. (Enclosure (54).)
197. DOD 4160.21-M paragraph 3a(5) states property will not be in original configuration when released from DoD control for example the area normally containing the hazardous material will be open for visible inspection. (Enclosure (57).)
198. DRMS-I 4160.14 Volume II Chapter 2, page 2-4, states if generator DEMIL is performed and the result is scrap residue, no certification is required upon turn in. If generator DEMIL results in the turn in of useable components, the generator is required to provide the DEMIL certificate. (Enclosure (64).)
199. DOD 4160.21-M-1 does not establish when demilitarization certification is required, only that it is necessary. (Enclosure (51).)
200. The DFARS 252.223-7002 requirement which requires the use of DoD 4145.26-M (DoD Contractors Safety Manual for Ammunition and Explosives) was not included in the contract for the soil remediation and OE removal. (Enclosures (7), (33), (60), and (62).)



## 5.0 Enclosure List

1. Indian Head Division Naval Surface Warfare Center Fire Department Log for 21 November 2002
2. Listing of Personnel Interviewed During Investigation
3. IHDIVNAVSURFWARCENINST 5090.18, Scrap Metal Recycling Program
4. Memorandum 5100 Ser 041/65 dated 26 November 2002; Subject: Investigation of Incident at the Scrap Yard
5. Resume of Al Grant
6. Post Incident Photographs
7. Order for Supplies or Services Delivery Order 0077 under Contract N62470-97-D-5000
8. UXO Support Plan (Final Revised UXO Support Plan Remedial Action for Site 41 – Scrap Yard, Indian Head Division – Naval Surface Warfare Center, Indian Head, Maryland dated October 25, 2002)
9. Frank James' Resume
10. Cover Page of Contract Number N62470-97-D-5000
11. Draft Work Plan Without Attachments
12. Not used
13. Work Permit dated 11/12/02
14. Hot Work Permits dated 11/13/02 and 11/18/02
15. Pre-Construction Meeting Record of 12 November 2002
16. Shaw E&I Daily Reports
17. DD Form 1348-1 For Roll-Off Dumpster
18. Work Order For 12-Inch Projectile To Be Placed Into Scrap Yard
19. MIL-STD-2105B, Hazard Assessment Tests for Non-Nuclear Munitions dated 12 January 1994
20. LBM Work Record for Water Leak at Building 705
21. NDW-IHDIVNAVSURFWARCEN 4035/30, Decontamination Green Tag for 4" Projectile issued on 4 November 2002
22. Cover Page of EM 385-1-1, US Army Corps of Engineers Safety and Health Requirements Manual dated 3 September 1996
23. Not used
24. LBM Work Order for 12-Inch Item on 7 November 2002
25. Decontamination Tag NDW-IHDIVNAVSURFWARCEN 4035/30 from Pages of Safety Manual
26. IHD NSWC Scrap Yard Photographs
27. Cover of Approved Work Plan
28. Designation Letters
29. Photographs of Steve Jackson's Clothing/Equipment
30. OPNAVINST 5090.1B, Chapter 14 – Navy Solid Waste/Recycling Program, Paragraph 3.7, Excluded Materials
31. Photograph of Fragments Sent to Hospital
32. Example of DD Form 2271
33. DFARS 252.223-7002 Safety Precautions for Ammunition and Explosives

34. Not used
35. Not used
36. Not used
37. Photographs of Base Ignition Fuze
38. Not used
39. Not used
40. Photographs of Fragments
41. Not used
42. Not used
43. NAVSEA OP 1664, Volume 1, Change 1, dated 15 January 1969
44. Not used
45. Not used
46. Not used
47. Not used
48. Not used
49. UXO Identification and Safety Class
50. DOD 4160.21-M, Chapter 4, Paragraph B3
51. DOD 4160.21-M-1, Pages II-2 and A4-13 through A4-15
52. NAVSEAINST 8023.11
53. NAVSEA OP 5 SOP requirement section 2-1.1.
54. NAVSEA OP 5 SOP requirement section 13-15.1
55. IHDIVNAVSURFWARCENINST 8020.4, Ch-1 dated 10 Mar 1998,  
Regulations Governing Receipt and Disposal of Decontaminated Scrap  
Materials Processed Through the Property Disposal Office
56. IHDIVNAVSURFWARCENINST 8023.4
57. DOD 4160.21-M-1, paragraph 3a(5)
58. Investigation of NSWC Scrap Yard Incident December 2002 Chemical and  
Physical Analysis
59. Geary and Loperfito, LLC Letter of 26 December 2002, IN RE: Steve Jackson
60. Technical Directive, TD-001
61. Modifications 1, 2, and 3 to Delivery Order 0077
62. Modification 4 to Delivery Order 0077
63. DRMS-I 4160.14, Volume II, chapter 2, page 2-4
64. Appendix 13-A, Safety Manual (Contractor Safety)
65. Not used
66. Not used
67. Not used
68. NAVSEA OP 5, Paragraphs 2-1.14.6 and 2-1.14.7
69. Invoice For Scrap Metal In Dumpster
70. Navy Technical Representative (NTR) Designation Letter
71. Receipt For Scrap Metal In Dumpster
72. Not used
73. Not used
74. IHDIVNAVSURFWARCENINST 5100.22, Chapters 1, 4, and 13
75. IHDIVNAVSURFWARCENINST 8020.5, Qualification/Certification
76. Bulletins for DoD 4160.21-M

77. QC Meeting of 21 November 2002 Attendance Sheet
78. IHD NSW Fire Department Pre-Construction Handout
79. Communications Regarding Site 41
80. Comments on UXO Support Plan
81. IHDIVNAVSURFWARCENINST 4570.2G
82. Not used
83. Email from Randy Johnson to Craig Smith 1/8/03. Subj: 4"/50 Projectile Burst Strength
84. Memo 8030 Ser 4210K/2 dated 09 Jan 03 Subj: Results of 4"/50 Projectile Residual Material Combustion Analysis @
85. Email from Susan Peters
86. TM 9-1300-203, Department of the Army Technical Manual dated April 1967
87. Comparative Analysis (UXO Support Plan Remedial Action for Site 41 – Scrap Yard)
88. Not used
89. Not used
90. DODD 5160.65-M Single Manager for Conventional Ammunition, Chapter 11, Section C

**Enclosure 1 – Indian Head Division Naval Surface Warfare Center Fire Department**  
**Log for 21 November 2002.**

**IHDIVNAVSURFWARCEN Fire Department Log**  
**Excerpt from 21 November 2002**  
**Incident # 548**

<b>Time</b>	<b>Action</b>
1410	Received call on 4333 reporting explosion at 436 scrap yard with injuries
1411	Charles county call advise they had received a call on 911 from Joe at 743-3550 reporting explosion and requesting help
1412	Eng. 201, 202, Medic 20, Ops Chief, Fire Chief, responding
1414	All units on scene, Fire Chief reporting of 2 possible injuries
1416	Fire Chief requested helo. via Charles County radio
1418	Ops Chief on scene, requested 2 <sup>nd</sup> ambulance from Charles County and call back 2 off duty personnel
1420	Chief requested Security to scene
1426	Command CDO advised of situation
1429	Ambulance 98 on scene
1442	Medic 20 enroute to CMC Pri-1
1449	Eng. 202 in service returning
1450	Ambulance 98 enroute to Fort Washington Pri-2
1452	Eng. 201, Ops Chief in service returning
1454	Eng. 202 in qtrs, Eng. 201 and Ops Chief also
1455	F/F Robey and Russell enroute in
1458	Medic 20 at CMC
1603	Medic 20 advised Pt. Was stabilized by Dr. Goodman in ER now being transported to Washington Hospital Center Pri-1
1700	F/F Homate on watch
1856	Medic 20 in qtrs
1900	FF R. Willett on watch

**Enclosure 2**  
**Listing of Personnel Interviewed During Investigation**

Interview Listing

Name	Organization	Title	Role
Al Grant	Shaw E&I	Senior UXO Supervisor	Witness, UXO Site Supervisor
Debra Anderson	Shaw E&I	UXO Technician	Witness, UXO Technician
William Bacon	Shaw E&I	Retired USN, EOD	Off-Site Munitions and Explosives Consultant
Jeff Morris	EFACHES	RPM	Navy Technical Representative for Remediation
Shawn Jorgensen	IHD NSWC	Environmental Engineer (Code 044SJ)	IHD NSWC POC for Remediation
Joe Minter	IHD NSWC	PDO Supervisor	Oversight of Scrap Yard
Curtis Ford	IHD NSWC	Applied Technology Department Employee	Plastic-media Blasted 4-Inch Projectile
Calvin Cobey	IHD NSWC	Supply Technician	Witness, Accepted 4-Inch Projectile into Scrap Yard
Frank James	IHD NSWC	Safety Inspector	Identified 4-Inch Projectile as Empty, Issued Work Permits
Norman Moore	IHD NSWC	OSH Division Director (Code 042)	Safety Inspector Supervisor
David Bode	IHD NSWC	Explosives Safety Division Director (Code 041)	Reviewed UXO Support Plan
Dan Bedell	IHD NSWC	PW Contract Specialist	Coordinated Rigging Contractor
Cathy Gardner	ROICC IH	Project Engineer for Site 41	Responsible for Quality Assurance
Carl Jarvis	ROICC IH	Supervisory General Engineer	ROICC Office Civilian Supervisor
Mike Olup	DD NSWC	Safety Range Officer	Pre-Planning Reviewer
Dan Pringle	Shaw E&I	Project Manager	Approved UXO Support Plan
Lt. Russ Hime	ROICC IH	ROICC	Resident Officer in Charge of Construction
Sherry Deskins	IHD NSWC	Environmental Division Director (Code 044)	Environmental Support

**Enclosure 2**  
**Listing of Personnel Interviewed During Investigation**

Name	Organization	Title	Role
Barbara Cockerham	IHD NSWC	Applied Technology Department Secretary	Telephoned Emergency Response
Steve Carrier	Shaw E&I	Site Supervisor	Non-UXO Site Supervisor
Joe Anderson	IHD NSWC	Branch Manager (Code 2120)	Witness
Valerie Plummer	IHD NSWC	Project Engineer (Code 2120P)	Witness
Randy Johnson	Shaw E&I	Site Supervisor	Witness
Anne Caris	IHD NSWC	Project Engineer (Code 2120K)	Witness
Bruce Ticknell	Shaw E&I	UXO Technician	Witness, UXO Technician
Ernie Duke	Shaw E&I	Quality Control	Witness
Dennis Gardner	Shaw E&I	Surveyor	Witness
Larry Mahiques	Shaw E&I	Equipment Operator	Witness
Mike Campbell	Shaw E&I	Equipment Operator	Witness
George (Mitch) Coker	Shaw E&I	Heavy Equipment Operator	Witness, Operating Front-End Loader
Richard Mach	NAVFAC	Environmental CLEAN UXO Program Manager	Ordered Development of UXO Identification Class
Joe Walker	Shaw E&I	Safety	Non-UXO Safety and Health Supervisor
Ray Mangum	ROICC IHD	Contracted Quality Assurance Support Inspector	ROICC Inspector

## Enclosure 3 – IHDIVNAVSURFWARCEN 5090.18



### DEPARTMENT OF THE NAVY

INDIAN HEAD DIVISION  
NAVAL SURFACE WARFARE CENTER  
101 STRAUSS AVE  
INDIAN HEAD MD 20640-5035

IHDIVNAVSURFWARCENINST 5090.18  
Code 11

#### IHDIVNAVSURFWARCEN INSTRUCTION 5090.18

000000 2001

From: Commander

Subj: SCRAP METAL RECYCLING PROGRAM

Ref: (a) DoD Manual 4150.21M  
(b) OPNAVINST OP-5

1. Purpose. To establish policy for the operation of the scrap metal recycling program and the scrap yard as prescribed in references (a) and (b).
2. Background. Indian Head Division has entered into a partnership with the Naval District Washington (NDW) Morale Welfare and Recreation (MWR) qualified recycling program for the purpose of recycling scrap metal.
3. Responsibility. The Property Disposal Office (PDO) is responsible for ensuring that all material delivered to the scrap yard has been inspected by the appropriate project manager and green tagged as "clean" for disposal by the Safety Department (Code 04). The PDO will ensure that all materials having contact with explosive or hazardous materials will be processed through the Solid Waste Recycling (SWR) Facility (B1770) prior to acceptance into the scrap metal recycling program.
4. Action. NDW will arrange for the staging of appropriate conveyances, pickup/emptying of conveyances and the removal and redistribution of recyclable materials. Number, type, and location of conveyances will be based on experience and will be monitored on a continuous basis during this program.
  - a. Scrap metal recycling drop-off locations for clean scrap metal will be the B127 scrap yard, B113 (Metal Shop), and B1770 clean scrap staging area. Other Safety Department-approved accumulation sites may be added as required.
  - b. The PDO manager has sole responsibility for the management and operation for the scrap yard. Scrap materials will not be dumped on the ground but will be placed into the delineated conveyances provided.
  - c. Clean scrap metal will be segregated to the degree feasible and loaded into specified dumpsters/roll offs stored in the scrap yard.

**Enclosure 3 – IHDI VNAV SURFWAR CEN 5090.18**

IHDI VNAV SURFWAR CEN 5090.18 06 DEC 2001

d. Responsibility for treatment of explosive contaminated scrap metal will be retained by the SWR Facility (B1770). Treated materials will be retained by the SWR while awaiting removal by the PDO.

e. Outsized scrap metal material such as outdated and non-explosive contaminated production equipment, metal buildings, steel light poles, and steel rails will continue to be accepted at the scrap yard. Expeditious removal of outsized material will be requested in order to make room for new materials sent to the scrap yard.

f. Specialized scrap metals containing hazardous gases/materials such as gas cylinders, Freon bottles, and steel drums/containers with or without residue will be handled using procedures outlined by the Safety Department and DRMO Fort Meade, Maryland.

g. Periodically, revenue generated by the scrap metal recycling program will be forwarded by NDW to the Indian Head Division Comptroller Department where it will be applied to the Indian Head net operating result.

h. Security. The scrap yard will be secured to prevent unauthorized entry when not in use. / /

MARC

Distribution:  
Department Heads  
Division Directors  
Branch Managers  
NIS



**Enclosure 4**  
**Memorandum 5100 SER 041/65 Dated 26 November 2002**

5100  
Ser 041/65

MEMORANDUM

26 NOV 2002

From: Commander  
To: 30C2  
Via: (1) 0408  
(2) 30C2

Subj: INVESTIGATION OF INCIDENT AT THE SCRAP YARD


Ref: (a) IHDIVNAVSURFWARCENINST 5100.22G, Chapter 30

1. I am assigning you to lead an investigation into the events surrounding the explosive incident at the Scrap Yard on Thursday, 21 November 2002. You will also serve as the IHDIV POC for all matters concerning this incident investigation.
2. Background: On 21 November 2002, two contractors were injured while cutting an item with a torch at the Scrap Yard.
3. Code 04 immediately suspended all operations at the Scrap Yard until completion of this investigation.
4. The following team members are tasked to conduct an investigation into this incident, per reference (a):
  - a. Wes Pero, Code 30C2, x4809 (Lead)
  - b. Anne Caris, Code 2120K, x1892
  - c. Craig Smith, Code 420, x4308
  - d. Kris Bigej, Code 041KB, x4322
  - e. Michael McCollum, NOSSA Code N7122,
  - f. Linda Goforth, EFACHES/NAVFAC, (202) 685-3299
  - g. Stan Lucas, x4734/4120 (voice mail)
5. The investigation shall address, at a minimum:
  - a. What circumstances lead to the incident?

**Enclosure 4**  
**Memorandum 5100 SER 041/65 Dated 26 November 2002**

Subj: INVESTIGATION OF INCIDENT AT THE SCRAP YARD

- b. What caused the incident?
  - c. What type and condition of ordnance was involved in this incident?
  - d. Were applicable procedures being followed by the contractor and by the Government?
  - e. Recommendations to prevent recurrence.
6. Team members shall ensure that information and evidence gathered pursuant to this investigation is protected from disclosure to anyone who does not have an official need to know. Team members shall not disseminate investigation information/evidence outside the team without prior approval by the Safety Investigation Officer.
7. Report is due by 31 December 2002.

  
MARC A. SIEDBAND

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**Enclosure 5**  
**Resume of Al Grant**

01/14/2003 14:00 FAX 7573637222

SHAW E&I INC

002

**Al Grant Resume**

**Albert C. Grant, Senior UXO Supervisor, UXO Quality Control**  
**Huntsville Corps of Engineers UXO Number 0725**

**Years of Experience:** Over 18 years experiences in UXO related work, nine years directly related to DoD OE Response projects, and over six years in current position with IT (now Shaw E & I).

**Education:** Date attended Basic EOD School: JAN 84 - AUG 84  
HAZWOPER 40 HOUR APR 94, HAZWOPER 8 HOUR July 02

Mr. Grant is one of the Lead Senior UXO Supervisors for Shaw E & I, OE Service Center. Our OE resources are united under a common management structure that allows Shaw E & I to staff tasks from a deep resource base, establish project teams in proximity to the project, and provide responsive and safe execution.

**EOD/UXO ASSIGNMENTS:**

- Nov 02 - NOV 02 Senior UXO Supervisor, Shaw E&I, at Naval Surface Warfare Center, Indian Head Division, Site 41 Scrap Yard Cleanup, Indian Head, MD.** Senior UXO Supervisor for UXO support during the hazardous and toxic waste remediation at Site 41.
- OCT 02 - NOV 02 Senior UXO Supervisor, Shaw E&I, Goodrich Ammunition Plant, Phoenix, AZ.** Supervised the emergency clean-up of an explosive storage area, after two of the explosive storage containers burned.
- AUG 02 - OCT 02 Senior UXO Supervisor, Shaw E&I, Fort Ord, CA.** Supervised and provided UXO avoidance support for lead range clean-up.
- MAR 02 - AUG 02 Senior UXO Supervisor, SHAW E&I, Ft. Ritchie, MD.** Supervised UXO Teams in locating, identifying, and disposal of UXO.
- FEB 02 - FEB 02 Senior UXO Supervisor, IT Corporation, Camp Pendleton, CA.** Supervised and performed UXO avoidance operations and preliminary site work for a new armor/antiarmor range on Camp Pendleton.
- JAN 02 - FEB 02 Senior UXO Supervisor, IT Corp., Kirkland AFB, NM.** Supervised the Geophysical Survey and the subsurface clearance of an OB/OD area.
- JUN 01 - DEC 01: Senior UXO Supervisor, IT Corporation, Ft. Ritchie, MD.** Supervised a UXO Teams in locating, identifying, and disposal of UXO.
- JUL 98 - JUN 01: UXO Supervisor, UXO Task Order Manager, and Site Health and Safety Officer, IT Corporation, Ft. Ord, CA.** Supervised UXO safety and escort efforts for a \$90M superfund clean-up project at Ft. Ord, CA.

**Al Grant Resume**

## Enclosure 5 Resume of Al Grant

01/14/2003 14:00 FAX 7573637222

SHAW E&I INC

003

### **Additional Projects based on Mr. Grant's Recollection:**

- JUN 98 - JUL 98:** UXO Supervisor, IT Corporation, Dahlgren, Virginia - Supervised a UXO clearance team at the U. S. Naval Weapons Station, Dahlgren, VA.
- MAY 96 - JUN 98:** UXO Technician III/Senior UXO Supervisor, UXO Task Order Manager, and Site H&S Officer, IT Corp. at Fort Ord, CA - Supervised UXO safety efforts for a \$90M superfund clean-up project.
- MAY 96 - MAY 96:** UXO Supervisor, IT Corp., Sandia Labs, NM- Supervised a UXO clearance team charged with the clearance of a 9-acre remediation site.
- MAR 96 - MAY 96:** UXO Technician III/Senior UXO Supervisor, UXO Task Order Manager, and Site Health & Safety Officer, IT Corporation at Fort Ord, California - Supervised UXO safety and escort efforts for a \$90-million superfund environmental clean-up project, at the Former Fort Ord.
- APR 95 - DEC 95:** UXO Supervisor, HFA, Fort Devens, Massachusetts - Supervised a UXO clearance team for The Fort Devens ordnance removal contract.
- JUL 94 - JAN 95:** UXO Supervisor, HFA, Camp Croft, South Carolina - Supervised a UXO clearance team and a survey team for an emergency ordnance removal contract on private land in Spartanburg, South Carolina.
- JUN 94 - JUN 94:** UXO Supervisor, HFA, Edgewood Arsenal, Maryland - Supervised a UXO clearance team in support of construction activities.
- JAN 94 - JUN 94:** UXO Supervisor, HFA, Waldorf, Maryland - Supervised a UXO Clearance Team for UXO investigation and removal at Fort Ord, CA.
- OCT 93 - DEC 93:** UXO Specialist, HFA, Indian Head, Maryland - Worked on various UXO contract delivery orders at Aberdeen Proving Ground, Maryland.
- JUL 92 - OCT 93:** Master EOD Technician, EOD Operations Sergeant, U.S. Army 21st EOD, Wildflecken, Germany - Supervised and coordinated range clearance operations, and stockpile ammunition disposal.
- JUL 90 - JUL 92:** Master EOD Technician, EOD Operations Sergeant, U.S. Army, 16th EOD, Camp Darby, Italy and Helenacon AB, Greece - Supervised, and provided EOD support for Camp Darby, the 10th Special Forces, and the U. S. Army Special Weapons Detachments.
- OCT 86 - JUL 90:** Senior EOD Technician, EOD Instructor and Technical Writer, U.S. Naval School for Explosive Ordnance Disposal, Indian Head, Maryland - Instructed U.S. and foreign EOD students and developed curriculum for EOD tools and procedures.
- AUG 84 - OCT 86:** EOD Technician, - 259th EOD, Fort Irwin, California - Provided EOD support for the National Training Center, Fort Irwin; U.S. Secret Service; U.S. State Dept.; local and state law enforcement departments in CA.

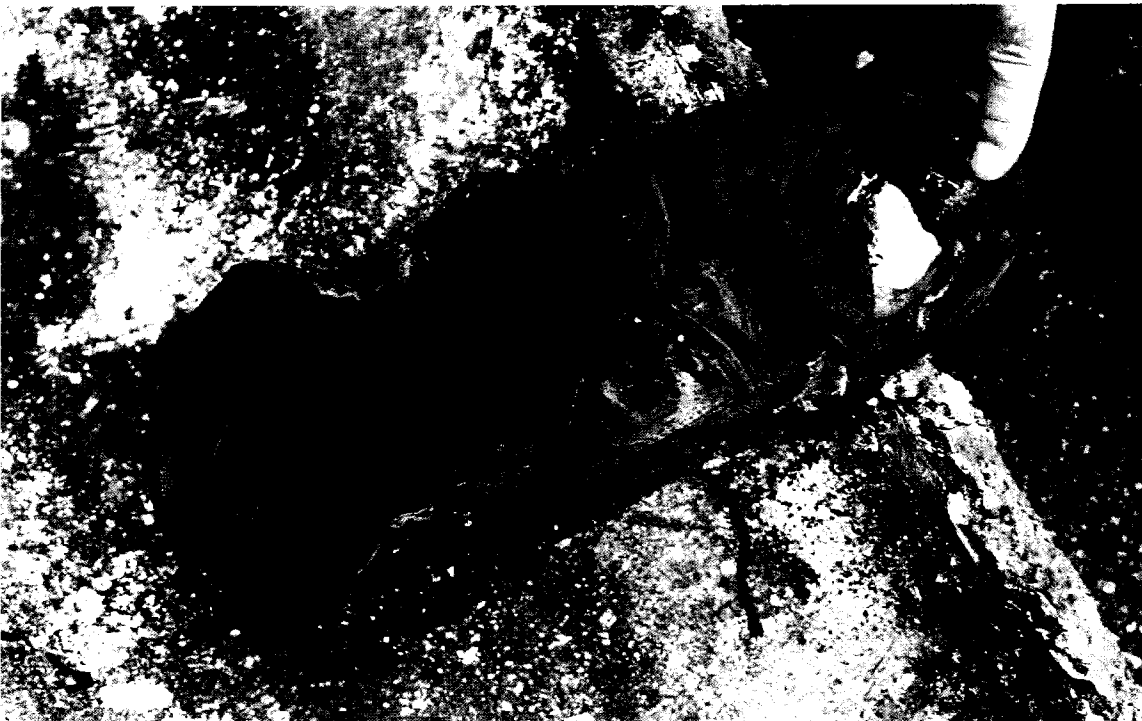
**Enclosure 6**  
**Post Incident Photos**



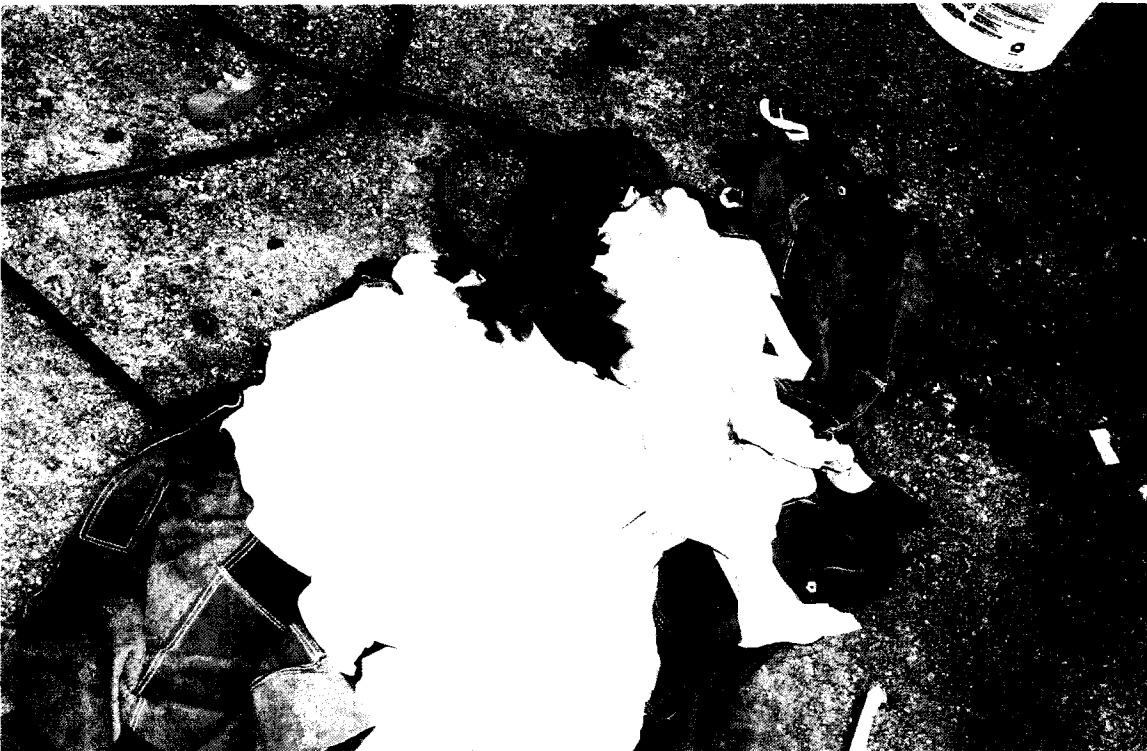
**Enclosure 6**  
**Post Incident Photos**



Enclosure 6  
Post Incident Photos

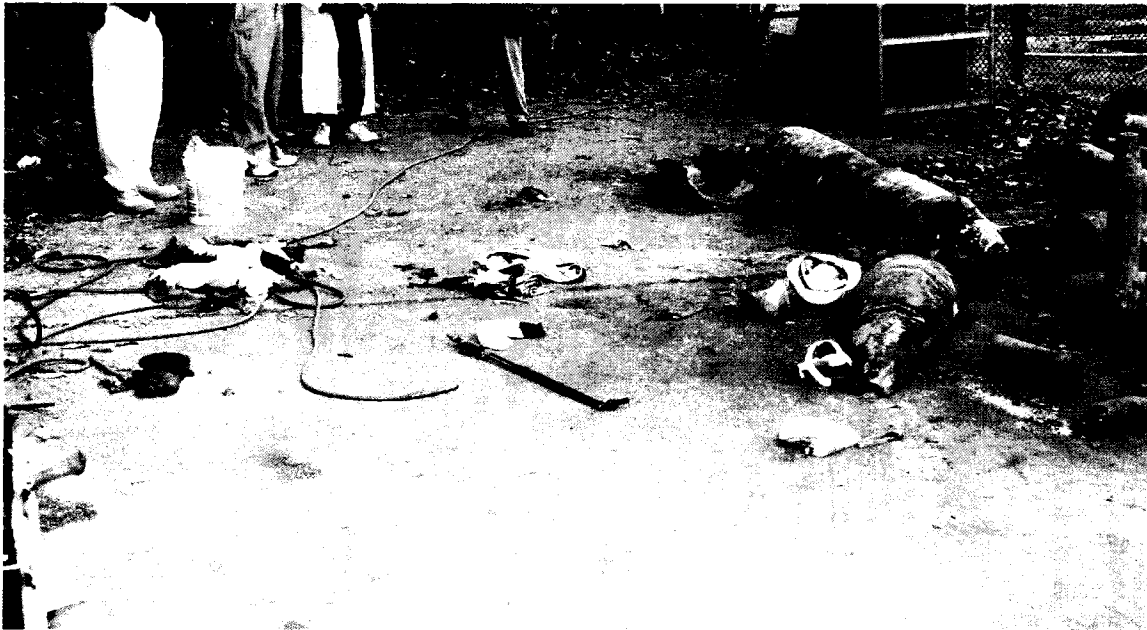


Enclosure 6  
Post Incident Photos





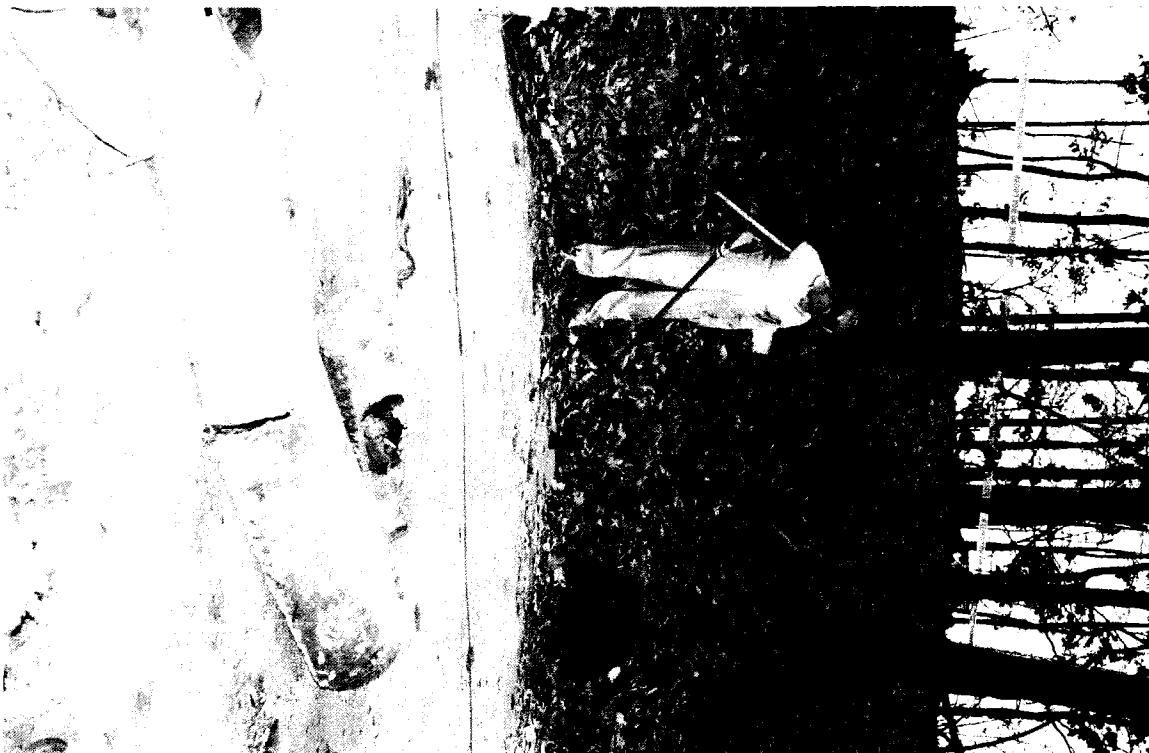
Enclosure 6  
Post Incident Photos



Enclosure 6  
Post Incident Photos



**Enclosure 6**  
**Post Incident Photos**



**Enclosure 6**  
**Post Incident Photos**



Enclosure 6  
Post Incident Photos



Enclosure 6  
Post Incident Photos





Enclosure 6  
Post Incident Photos



**Enclosure 7.**  
**Order for Supplies or Services Delivery 0077**  
**Under Contract N62470-97-D-5000**

ORDER FOR SUPPLIES OR SERVICES						PAGE 1 OF 9			
1. CONTRACT/PURCH ORDER/ AGREEMENT NO. N62470-97-D-5000		2. DELIVERY ORDER/ CALL NO. 0077		3. DATE OF ORDER/ CALL 2001 Sep 21		4. RBQ/ PURCH REQUEST NO. PR-5000-97-0077		5. PRIORITY	
6. ISSUED BY COMMANDER, ATLANTIC DIVISION NAVFACENGCOM 1510 GILBERT STREET BUILDING N26 NORFOLK VA 23511-2699		CODE N62470		7. ADMINISTERED BY  <b>SEE ITEM 6</b>		CODE		8. DELIVERY FOB <input checked="" type="checkbox"/> DEST <input type="checkbox"/> OTHER  (See Schedule if other)	
9. CONTRACTOR OHM REMEDIATION SERVICES CORPORATION 5700 THURSTON AVE. SUITE 116B VIRGINIA BEACH VA 23455-3302		CODE 4V026		FACILITY		10. DELIVER TO FOB POINT BY (Date) <b>SEE SCHEDULE</b>		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	
12. DISCOUNT TERMS		13. MAIL INVOICES TO THE ADDRESS IN BLOCK See Block 6 (Code AQ118)		14. SHIP TO  <b>SEE SCHEDULE</b>		CODE		15. PAYMENT WILL BE MADE BY DEFENSE FINANCE AND ACCOUNTING SERVICE ATTN FPV P O BOX 23870 OAKLAND CA 94623-3870	
16. TYPE OF ORDER DELIVERY/ CALL PURCHASE		<input checked="" type="checkbox"/> X This delivery order/call is issued on another Govt. agency or in accordance with and subject to terms and conditions of above numbered contract. Reference your quote dated _____		Pursuant the following on terms specified herein.		17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE <b>See Schedule</b>		18. ITEM NO.	
19. SCHEDULE OF SUPPLIES/ SERVICES <b>SEE SCHEDULE</b>		20. QUANTITY ORDERED/ ACCEPTED*		21. UNIT		22. UNIT PRICE		23. AMOUNT	
24. UNITED STATES OF AMERICA <i>Brenda Smith</i> BY: BRENDA SMITH CONTRACTING / ORDERING OFFICER		25. TOTAL \$4,182.00		26. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED		27. SHIP NO. <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		28. DO VOUCHER NO.	
29. DIFFERENCES		30. INITIALS		31. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR	
34. CHECK NUMBER		35. BILL OF LADING NO.		36. I certify this account is correct and proper for payment. DATE _____ SIGNATURE AND TITLE OF CERTIFYING OFFICER _____		37. RECEIVED AT		38. RECEIVED BY	
39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO.		42. S/R VOUCHER NO.			

DD Form 1155, JAN 1998 (EG)

PREVIOUS EDITION MAY BE USED.



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SECTION B Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0004			Dollars, U.S.	\$	\$ NTE

NSWC INDIAN HEAD, MARYLAND  
CPAF - MULTI-CONTAMINANT ENVIRONMENTAL REMEDIAL  
ACTION CONTRACT

This modification is issued in accordance with the prices established in task order 0020-07 dated October 1, 2000, to furnish all labor, materials, equipment, supervision, travel and subsistence necessary for the contractor to initiate remedial action for a design review for Site 41, Scrap Yard, at the Naval Surface Warfare Center, Indian Head, Maryland, as shown in Scope of Work dated September 20, 2001, attached hereto and made a part hereof, all as directed by the Contracting Officer.

Copy to: EFA CHES CH20C (JM/JC) NSWC ROICC EV31KEW  
EV31JPR CI51GH AQ11 AQ113 AQ117 AQ11 (FIS) DCAA

Contracting Officer's email address: smithbw@efdlant.navy.mil -  
Telephone No. 757-322-4594

PURCHASE REQUEST NUMBER PR-5000-97-0077

MAX COST	\$3,938.00
BASE FEE	\$0.00
SUBTOTAL MAX COST + BASE	\$3,938.00
MAX AWARD FEE	\$244.00
TOTAL MAX COST + FEE	\$4,182.00

**Enclosure 7.**  
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SECTION C Descriptions and Specifications

**MULTI-CONTAMINANT ENVIRONMENTAL REMEDIAL ACTION CONTRACT: RA FOR SITE 41,  
NAVSURFWARREN, INDIAN HEAD, MARYLAND**

**SECTION I**      **ESTIMATED COST AND AWARD FEE**

1.0      This task order is placed under a cost plus award fee, indefinite task/indefinite quantity type contract.

1.1      The cost for the pre-priced design review is hereby fully funded based on the following:

The estimated cost	\$3,938
The maximum award fee is	\$ 244
Total not-to-exceed cost plus award fee is	\$4,182

The total estimated not-to-exceed cost plus award fee for this task order is \$4,182.00.

Fund Type: Activity (EFA CHES)

**SECTION II**      **TYPE OF TASK ORDER**

2.0      This task order is service type and not subject to the Davis Bacon Act.

**SECTION III**      **INVOICING**

3.0      Invoices submitted against this task order shall not exceed the maximum direct hourly labor rate set forth in the Memorandum of Agreement.

As specified in the basic contract, submit invoices and all necessary supporting documentation in an original and 1 copy to the contract auditor (DCAA), one copy with necessary documentation shall also be forwarded to the Contracting Officer, ROICC/NTR, and the RPM. (Addresses included herein.)

**SECTION IV**      **PERIOD OF PERFORMANCE**

4.0      Date for the site visit shall be coordinated between the NTR and contractor.

**SECTION V**      **INSPECTION AND ACCEPTANCE**

5.0      Inspection and Acceptance will be performed at destination by the NTR.

**SECTION VI**      **SUBMITTALS**

6.0      **Monthly Status Report:** Shall be provided to the Contracting Officer, COTR, NTR, and RPM. The report is to be provided no later than the 15th of each month.

**SECTION VII**      **GOVERNMENT FURNISHED MATERIAL/PROPERTY/INFORMATION**

7.0      N/A

**Enclosure 7.**  
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MULTI-CONTAMINANT ENVIRONMENTAL REMEDIAL ACTION CONTRACT: RA FOR SITE 41,  
NAVSURFWARREN, INDIAN HEAD, MARYLAND

**SECTION VIII TRAVEL**

- 8.0 Travel will be in accordance with the Basic Contract, Clause G20, Joint Travel Regulations and Standardize Regulations set forth in FAR 31.205-46.

**SECTION IX LIMITATION OF COST**

- 9.0 FAR CLAUSE 52.232-20 of the basic contract is incorporated by reference in this task order. Stated herein in part:

The contractor shall notify the Contracting Officer in writing whenever it has reason to believe:

(1) The costs the contractor expects to incur under the task order in the next 60 days (unless varied in the task order) when added to all costs previously incurred, will exceed 75 percent (unless varied in the task order) of the estimated cost specified in the task order;

(2) The total cost for the performance of the task order, exclusive of any fee, will be either greater or substantially less than had been previously estimated.

**SECTION X CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COTR)**

- 10.0 The COTR is responsible for monitoring the performance and progress as well as overall technical management of this order and should be contacted regarding questions or problems of a technical nature. The COTR has no authority to direct you in any way to alter, either directly or indirectly, the pricing, quantity, quality, place of performance, task schedule, or any other terms and conditions of the order, or to direct the accomplishment of effort which goes beyond the scope of the statement of work.

When in the opinion of the contractor, the COTR requests effort outside the scope of the order, the contractor will promptly notify the Contracting Officer in writing. No action shall be taken by the contractor under such direction until the Contracting Officer has issued a modification to this order or has otherwise resolved the issue.

- 10.1 The COTR for this task order is:

Ms. Karen Wilson  
Atlantic Division, NAVFACENGCOM  
1510 Gilbert Street  
Norfolk, VA 23511-2699  
Code EV31KEW (757) 322-4817 / Fax: (757) 322-4805  
Email: [WilsonKE@efdlant.navy.mil](mailto:WilsonKE@efdlant.navy.mil)

**Enclosure 7.**  
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**MULTI-CONTAMINANT ENVIRONMENTAL REMEDIAL ACTION CONTRACT: RA FOR SITE 41,  
NAVSURFWARCEN, INDIAN HEAD, MARYLAND**

10.2 The Resident Officer in Charge of Contracts for this task order is:

Ms. Cathy Gardner  
ROICC Indian Head Division,  
Naval Surface Warfare Center  
NAVFACENGCOM Contracts  
Building 351  
Indian Head, MD 20640-5504  
Email: [gardnercb@efaches.navfac.navy.mil](mailto:gardnercb@efaches.navfac.navy.mil)

10.3 The RPM/NTR for this task order is:

Mr. Jeff Morris, Code CH20C  
Commanding Officer  
Engineering Field Activity Chesapeake  
1314 Harwood Street, SE  
Washington Navy Yard DC 20374-5018  
202-685-3279  
202-433-7018 (fax)  
email: [morrisjw@efaches.navfac.navy.mil](mailto:morrisjw@efaches.navfac.navy.mil)

10.4 The Activity Point of Contact (POC) for this task order is:

Mr. Shawn A. Jorgensen Code 046C, Bldg. D-327  
Indian Head Division,  
Naval Surface Warfare Center  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
301-744-2263  
301-744-4180 (fax)  
email: [jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)

**SECTION XI** **PROCURING CONTRACT OFFICE REPRESENTATIVE**

11.1 The Contracting Officer/Contract Specialist for this task order is:

Ms. Brenda Smith  
Atlantic Division, NAVFACENGCOM  
Code AQ113  
(757) 322-4594 / FAX: (757) 322-4166  
Email: [SmithBW@efdlant.navfac.navy.mil](mailto:SmithBW@efdlant.navfac.navy.mil)

**Enclosure 7.**  
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MULTI-CONTAMINANT ENVIRONMENTAL REMEDIAL ACTION CONTRACT: RA FOR SITE 41,  
NAVSURFWARREN, INDIAN HEAD, MARYLAND

Express Mail Address (only):

Atlantic Division  
Naval Facilities Engineering Command  
6506 Hampton Boulevard, Room 3700  
Norfolk, VA 23508-1297

11.2

DCAA Office:

DCAA  
Mr. Paul Rilius  
William S. Morehead Federal Building  
1000 Liberty Avenue  
Pittsburgh, PA 15222-4003  
Email: prilius@dcaa.mil

**Enclosure 7.**  
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September 20, 2001

Engineering Field Activity, Chesapeake  
Naval Facilities Engineering Command  
Washington Navy Yard, DC

**STATEMENT OF WORK**

**SITE 41 REMEDIAL DESIGN REVIEW**  
Naval Surface Warfare Center (NSWC),  
Indian Head Division  
Indian Head, Maryland

**1.0 INTRODUCTION/BACKGROUND**

**SITE 41 – SCRAPYARD**

**Site Location and Description**

Site 41 – Scrap Yard is located along the Mattawoman Creek just upstream from the Site 39 outfall. From the 1960s to 1988, electrical transformers were stored at the northwestern end of Site 41 prior to off-site disposal. Following an inspection conducted in 1981, 17 transformers were identified as either PCB contaminated or PCB containing (NEESA, 1983). These transformers were believed to have leaked and contaminated the soil in this portion of Site 41. Additionally, lead batteries were stored in the Site 41 scrapyard and may have released lead to the surface soils (E/A&H, 1994). Runoff from Site 41 flows southwest, into Mattawoman Creek, upstream of Site 39.

The Selected Remedy for Site 41 is soil removal with land use restrictions and shallow groundwater monitoring. There is the potential for small-scale explosives in the form of cartridge-activated devices (CADs) to be in the soil.

**2.0 REMEDIAL DESIGN REVIEW OBJECTIVES**

The Contractor shall review the 65% Remedial Design for Site 41 – Scrapyard. The Contractor shall provide comments on the proposed remedial design based on implementability and constructability.

**TASKS:**

- Task 1: Site visit
- Task 2: Implementability and Constructability Report

**DELIVERABLES:**

- Final Implementability and Constructability Report
- Project Submittal Distribution: Hard copies shall be distributed as follows. In addition, each deliverable shall be submitted electronically as a single file in PDF format.

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**Enclosure 7.**  
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	EFACHES	NSWCIH	EPA	MDE	ROICC
Final Report	2	10	2	1	1

**MAILING ADDRESSES: DIRECT DISTRIBUTION TO EACH ADDRESSEE BY RAC IS REQUIRED**

Commanding Officer  
Engineering Field Activity Chesapeake  
Attn: Jeff Morris, Code CH20C  
1314 Harwood Street, SE  
Washington Navy Yard DC 20374-5018  
202-685-3279  
202-433-7018 (fax)  
[morisjiw@efaches.navfac.navy.mil](mailto:morrisjw@efaches.navfac.navy.mil)

Indian Head Division,  
Naval Surface Warfare Center  
Attn: Shawn A. Jorgensen Code 046C, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
301-744-2263  
301-744-4180 (fax)  
[jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)

U.S Environmental Protection Agency  
Region III  
Attn: Dennis Orenshaw  
1650 Arch St  
Philadelphia PA 19103-2029  
215-814-3361  
215-814-3051 (fax)  
[orenshaw.dennis@epamail.epa.gov](mailto:orenshaw.dennis@epamail.epa.gov)

Maryland Department of the Environment  
Federal/NPL/Superfund Division  
Attn: Curtis DeTore  
2500 Broening Hwy  
Baltimore MD 21224  
410-631-3440  
410-631-3472  
[cdetore@mde.state.md.us](mailto:cdetore@mde.state.md.us)

ROICC Indian Head Division,  
Naval Surface Warfare Center  
NAVFACENGCOM Contracts  
Building 351  
Indian Head, MD 20640-5504

**Enclosure 7.**  
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SECTION G Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: AA 17 01011804 KU2E 0252 62470 P 068732 2D RC1892 AA00C0000062 RCP  
N6247001RCC0892  
AMOUNT: \$4,182.00



## Enclosure 8. UXO Support Plan



OHM Remediation  
Services Corp.

**FINAL  
REVISED  
UXO SUPPORT PLAN  
REMEDIAL ACTION FOR SITE 41 - SCRAP YARD  
INDIAN HEAD DIVISION - NAVAL SURFACE WARFARE CENTER  
INDIAN HEAD, MARYLAND**

**CONTRACT NO. N62470-97-D-5000  
TASK ORDER 077**

Prepared for:

DEPARTMENT OF THE NAVY  
Engineering Field Activity - Chesapeake  
1314 Harwood Street SE  
Washington Navy Yard, DC 20374-5018

Prepared by:

OHM Remediation Services Corporation  
2790 Mosside Boulevard  
Monroeville, Pennsylvania 15146-2792

Reviewed by:

*Daniel W. Pringle*

Daniel W. Pringle  
Project Manager

*Daniel c 77A* *for*  
Roland S. Moreau, PE  
Program Manager *RSM*

Project No. 831866

October 25, 2002

## **Enclosure 8. UXO Support Plan**

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## **Enclosure 8. UXO Support Plan**

### ***LIST OF ACRONYMS***

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<u>Acronym</u>	<u>Title</u>
AHA	Activity Hazard Analysis
CAD	Cartridge Actuated Device
CEHNC	U.S. Army Engineering and Support Center, Huntsville
DRMO	Defense Reutilization and Marketing Office
EOD	explosive ordnance disposal
EP	Engineer Pamphlet
EZ	exclusion zone
IHDIV-NSWC	Indian Head Division, Naval Surface Warfare Center
MU	Mobile Unit
NAVSEA	Naval Sea Systems Command
NAVSEAINST	Naval Sea Systems Command Instruction
OE	ordnance and explosives
OHM	OHM Remediation Services Corporation
OP	Ordnance Publication
PAD	Propellant Actuated Device
PPE	personal protective equipment
QC	Quality Control
Q-D	quantity distance
ROICC	Resident Officer in Charge of Construction
Shaw E&I	Shaw Environmental and Infrastructure, Inc.
Site 41	Site 41 - Scrap Yard
SOP	Standard Operating Procedure
SSHASP	Site Specific Health and Safety Plan
SSO	Site Safety Officer
UXO	unexploded ordnance

## **Enclosure 8. UXO Support Plan**

i

### **1.0 INTRODUCTION**

This Unexploded Ordnance (UXO) Support Plan has been prepared by OHM Remediation Services Corporation (OHM) to support the remedial action activities of the Site 41 - Scrap Yard (Site 41) at the Indian Head Division - Naval Surface Warfare Center (IHDIV-NSWC) in Indian Head, Maryland. This plan will be used to guide the performance of UXO support operations. This UXO Support Plan provides the technical basis for observing, locating, identifying, separating, demilitarizing and disposing of UXO items while conducting excavation activities that may unearth potential or suspect UXO items.

This plan contains the following sections:

- Section 2.0 - Site Background and Objectives
- Section 3.0 - UXO Support Activities
- Section 4.0 - Site Safety and Personal Protective Equipment.

The following Standard Operating Procedures (SOPs) for performing UXO support are included as attachments to this plan:

- Attachment A - UXO Related Scrap Metal Collection, Inspection and Demilitarization Procedures
- Attachment B - UXO Transportation Procedures.

The UXO Support Plan procedures incorporate the guidance and requirements of Naval Sea Systems Command Instruction (NAVSEAINST) 8023.11, Naval Sea Systems Command (NAVSEA) Ordnance Publication (OP) 5, and U.S. Army Engineering and Support Center, Huntsville (CEHNC) Engineer Pamphlet (EP) 75-1-2. The UXO Support Plan addresses the standard operating procedures to be used by all Shaw Environmental and Infrastructure, Inc. (Shaw E&I) personnel to minimize the risk from ordnance and explosives (OE). The procedures for conducting the UXO support are detailed in the following sections of this plan.

## **Enclosure 8. UXO Support Plan**

### **2.0 SITE BACKGROUND AND OBJECTIVES**

---

The purpose of the UXO Support Plan is to provide the standard operating procedures to be used at Site 41 by Shaw E&I UXO and support personnel and to provide the methodology to prevent Shaw E&I employees and base personnel from coming into contact and accidentally disturbing potentially hazardous UXO items while performing UXO location, identification, separation, and demilitarization activities prior to, during, and after soil removal and excavation operations.

#### **2.1 SITE BACKGROUND AND EXISTING CONDITIONS**

The main goal of IHDIV-NSWC is to provide services in energetics, ordnance devices and components, and other related ordnance engineering standards, including chemicals, propellants, and their propulsion systems, explosives, pyrotechnics, warheads, and simulators. Site 41 is located along the Mattawoman Creek on the Base and contains scrap metal as well as numerous ordnance items including Cartridge Actuated Devices (CAD)/Propellant Actuated Devices (PAD), rocket motors, bomb casings, and bomblets. All items appear to be inert; however, UXO procedures will be used when conducting excavation operations. A UXO team will mobilize to the site to identify, separate, and demilitarize the surface UXO prior to conducting other remedial activities at the site. In addition, a two-man UXO team will be on site in order to perform UXO support duties for the removal and screening of contaminated soil.

Site 41 consists of a large concrete pad used to store scrap metal and other items and an adjacent area consisting of flat ground and railroad tracks. The concrete pad contains a variety of scrap metal and contaminated soil as well as common military munitions. In general, military ordnance must receive certain forces to become armed, ready to function, and capable of detonating on impact or proximity. Since the site is not an ordnance impact area, common military ordnance items should be in the unarmed condition. All site workers shall be aware that unusual and possibly hazardous ordnance items may be encountered at the site and the workers are required to inform UXO personnel of any suspect items discovered.

#### **2.2 OBJECTIVES**

The objective of this work<sup>2</sup> is to ensure that the soils and waste removed from the site during excavation activities are screened for OE/UXO. Any OE/UXO items discovered will be visually inspected to insure that these items are free of energetic material, and separated from the non-OE debris. Demilitarization and scrap management procedures will be employed in accordance with site-specific procedures. Soil remaining on the concrete pad will be visually inspected then mechanically screened to separate smaller OE/UXO items from the contaminated soil. Inert UXO will be demilitarized to 5x standards in accordance with Appendix A and returned to the Defense Reutilization and Marketing Office (DRMO) or hauled off site for metal recycling. Other UXO will be handled as described in this support plan.

## **Enclosure 8. UXO Support Plan**

### **3.0 UXO SUPPORT ACTIVITIES**

---

This UXO Support Plan has been prepared to provide procedures that will allow for the safe identification, movement, and disposal of the OE-related items on the concrete pad and mixed with other soil to be excavated. Currently, the site contains a variety of OE-related items. The larger items have been segregated from the PCB-contaminated soil and are staged on the concrete pad at various locations near the entrance. These staged items include items previously certified as inert and items not yet identified as such. Many of the larger items contain concrete or asphalt as the filler. Other smaller items, such as the CAD items, are inner-mixed with the contaminated soil and will require mechanical screening. In addition, there are numerous non-OE related items, such as reinforcing and structural steel also mixed in with the soil. The handling and disposal of the non-OE related items is discussed in the Work Plan. This plan deals specifically with the handling and disposal of OE-related items and shapes.

The specific OE/UXO-related activities for this site will include the following:

- Initially identify which segregated OE-related items are inert and further separate into groups.
- Visually identify additional OE/UXO items scattered throughout the site and collect and separate into groups.
- During the mechanical screening operation, continue to identify and separate the OE/UXO items.
- Conduct demilitarization of inert items.

All Shaw E&I site employees and base personnel working at Site 41 during UXO-related remedial operations will follow the following OE/UXO support procedures. These OE/UXO procedures will be implemented to prevent site workers from accidentally coming into contact with UXO and for delineating the methods that the Shaw E&I UXO team will use if OE/UXO is encountered. The recommended procedures to be followed and equipment to be used by the UXO team in the performance of their duties are provided in the following subsections.

#### **3.1 UXO TEAM COMPOSITION**

As required by the U.S. Army Engineering and Support Center, Huntsville, Engineering Pamphlet (EP) 75-1-2 (UXO Support During HTRW and Construction Activities), the UXO team will be comprised of a minimum of two Shaw E&I UXO personnel designated by the Shaw E&I OE Service Center who are qualified in accordance with CEHNC EP 1110-1-18. The supervisor for the team will have the minimum experience of a UXO Technician III and the other member will have the minimum experience of a UXO Technician II.

#### **3.2 UXO TRAINING**

The UXO Supervisor will conduct Explosive Ordnance Recognition training for other members of the

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field crew prior to conducting operations at Site 41. Training will consist of describing basic UXO characteristics, identification, certification procedures, demilitarization techniques, disposal procedures, and safety precautions. The Site Safety Officer (SSO) will assist in the training but will not lead initial training unless he/she is a qualified UXO technician. This will avoid the possibility of conveying inaccurate information on UXO items.

### **3.3 GENERAL OE/UXO SUPPORT**

The UXO technicians will mobilize to the site to begin UXO support. The UXO technicians will initially identify and separate the large surface UXO. The field crew will mobilize to the site after the initial UXO activity. Because of the large volume of OE scrap present at Site 41, UXO technicians will be present at all excavation and soil removal activities, power screening operations, OE Scrap removal efforts, and inert OE Scrap demilitarization. Detailed operating procedures which must be followed are specified in Attachment A.

#### **3.4.1 Excavations, Screening, and OE Removal**

One UXO technician will observe the soil removal operation by standing in a safe area to the side of the excavator or loader outside of the swing radius. This UXO technician will be responsible for examining the face of the excavation and the material as it is being loaded into the excavator or loader bucket. The surface of the excavation will be carefully observed to visually detect UXO before they are potentially disturbed. The UXO technician will take advantage of natural or placed protective structures to shield himself from the potential hazard of falling or projected debris. Additionally, all excavated soils will be mechanically screened for UXO. The second UXO technician will be positioned at the mechanical screener to examine the materials as they are processed by the screener. Using hand signals, the UXO technicians will communicate with the equipment operators to stop the soil removal or screening process. If suspected UXO are observed (Upon receiving the signal to stop) the equipment operator will immediately place the bucket on the ground and shut down the equipment. The UXO team will then examine the item to determine if it is inert OE or potentially live. OE scrap will be moved to the appropriate area as outlined in Attachment A.

#### **3.4.2 OE Disposition**

During the field screening and material handling operation, three types of OE items may be encountered. These include the following:

- Inert OE
- Potentially live but safe to move
- Potentially live and unsafe to move.

The following sections will discuss the procedures to be followed when each of these types of OE items are identified.

##### **3.4.2.1 Inert OE**

It is anticipated that all OE encountered will be inert. However, each item will be carefully examined before moving. OE items encountered that are believed inert but require additional internal inspection to

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certify them as such will be moved to the area designated for this purpose as specified in Attachment A. Examples in this category include concrete filled MK83 bombs. OE found and determined inert will be moved to the appropriate designated area for demilitarization and certification as specified in Attachment A.

#### **3.4.2.2 UXO Live But Safe to Move**

If an OE item is found which upon investigation is determined to be potentially live but safe to move, the UXO team will remove the item from the excavation or screening area to a safe holding area on site. This area will be located close to the site but at a distance sufficient so as not to interfere in ongoing operations. The Resident Officer in Charge of Construction (ROICC) and Base Safety Department will be notified immediately and will notify Explosive Ordnance Disposal (EOD) Mobile Unit (MU) Two Detachment Dahlgren, if necessary. Material requiring off-site removal will be separated into piles according to material makeup and disposal destination. Base Safety Department will make arrangements for final disposition of the item, including transportation and storage. If Shaw E&I becomes involved with UXO transportation, the procedures in Attachment B will be followed.

#### **3.4.2.3 UXO Live and Not Safe to Move**

If an OE item is found and determined hazardous or its condition is unknown, IHDIV-NSWC safety personnel will be requested to establish an Exclusion Zone (EZ) based on the quantity distance (Q-D) arc for the munition to protect base personnel and other site workers from exposure to the UXO hazards. The EZ will encompass the area of activity and will have access and egress control. Only UXO support personnel and safety specialists will be authorized for unescorted access in the EZ. All UXO work activities will cease immediately if non-UXO or unauthorized personnel enter the EZ.

Hazardous UXO items that are either unsafe to move or whose condition is unknown will be marked by brightly colored flagging tape. The ROICC and Base Safety Department will be immediately notified. All excavation and/or screening activities will stop and a UXO EZ will be established based on the Q-D arc for the munition described by OP5. Only EOD/UXO qualified personnel or those designated by Base Safety Department will be allowed in the EZ without a safety escort. The UXO team will notify site management personnel of the type and hazard of the UXO located and marked. Base Safety Department will assume responsibility for contacting EOD MU Two Detachment Dahlgren to arrange for final disposition if needed or will utilize base personnel certified to utilize an appropriate SOP for the item in accordance with NAVSEAINST 8023.11. This may be the case for CAD/PADs.

### **3.5 QUALITY CONTROL**

The UXO Supervisor or QC Manager will act as the on-site UXO Quality Control (QC) Specialist. He will inspect certification and demilitarization documentation for compliance with QC documentation standards.



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### ***4.0 SITE SAFETY AND PERSONAL PROTECTIVE EQUIPMENT***

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UXO personnel performing work at Site 41 will follow the Site Specific Health and Safety Plan (SSHASP) presented in Appendix D of the Work Plan. This work is anticipated to be conducted in Level "D" PPE. Since the major safety concerns are from heavy equipment operations and heavy pieces of OE scrap the UXO technicians will wear steel toed safety boots and hardhats both of which are normally excepted from OE operations.

An Shaw E&I SSO will work with the UXO team to ensure that the requirements of the SSHASP are followed and a review of the Activity Hazard Analysis (AHA) is conducted by the UXO team members.

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***ATTACHMENT A  
UXO RELATED SCRAP METAL COLLECTION AND  
INSPECTION PROCEDURES***

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**UXO Related Scrap Metal Collection, Inspection and  
Demilitarization Procedures  
For  
UXO Support at IHDIV-NSWC Indian Head, Maryland**

**October 2002**

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### **LIST OF ACRONYMS**

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AEDA	Ammunition Explosives Dangerous Article
CCLI	Commerce Control List Items
DoD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EOD	Explosive Ordnance Disposal
HE	High-Explosive
HEAT	High-Explosive Anti-Tank
IHDIV-NSWC	Indian Head Division -- Naval Surface Warfare Center
IWP	Industrial Waste Processor
LDGP	Low Drag General Purpose
MLI	Munitions List Items
OE	Ordnance Explosives
OHM	OHM Remediation Services Corporation
QRP	Qualified Recycling Program
ROICC	Resident Officer In Charge of Construction
Shaw E&I	Shaw Environmental and Infrastructure, Inc.
SOP	Standard Operating Procedure
UXO	Unexploded Ordnance

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### **1.0 Purpose**

This standard operating procedure (SOP) will be followed by UXO Technicians in order to safely demilitarize and dispose of OE related scrap found at Site 41 IHD NSWC. The inherently dangerous characteristics of Ammunition Explosives Dangerous Articles (AEDA) dictate that special precaution be taken to ensure that demilitarization is performed only by properly trained and technically qualified personnel

### **2.0 Background**

The procedures below are designed to reduce the potential pitfalls of improperly handling (co-mingling of hazardous and non-hazardous scrap) OE scrap items.

#### **References**

DoD 4160.21-M	Department of Defense Reutilization and Marketing Manual
DoD 4160.21-M-1	Department of Defense Demilitarization Manual
TB 700-4	Department of the Army Technical Bulletin - Decontamination of Facilities and Equipment

### **3.0 Collection Procedures and Segregation Procedures**

At the operating site, Shaw Environmental and Infrastructure, Inc. (Shaw E&I) UXO technicians will examine any inert OE or metals removed from the site and categorize it as OE or non-OE Scrap. The items will then be segregated into three areas. One area will be designated for metal Scrap (non-OE). Another will be designated for certified inert OE scrap that requires additional demilitarization. A third will be designated for Suspected inert OE but requires additional inspection due to inability to gain access to the interior of the item. Once inert OE items have been demilitarized in accordance with DODD 4160.21-m-1 they will be designated 3X scrap or 5X Scrap if the item never contained energetic materials such as training bomblets. All 3x must be heat treated by the Industrial Waste Process (IWP) facility at IHDIV-NSWC and certified 5X before it is ready for release from DoD control to a DRMO designated Scrap dealer

### **4.0 Demilitarization Methods**

Demilitarization should be accomplished by the most cost effective method consistent with adequate security and surveillance as practical in accordance with existing environmental standards, safety and operational regulations, to the point of assuring freedom from explosives, toxic or incendiary materials, smoke content or design hazards. Due to the number of large bomb cases and rocket boosters a plasma cutter will be used to demil a considerable amount of the inert OE materials that have been certified visually free of energetic material. Smaller items will be crushed by a backhoe where possible. Only individuals trained in its use and following the operating instructions provided by the manufacturer will use the plasma cutter. **SAFETY**

**NOTE: For inert loaded items (concrete, sand, plaster) a potential explosive safety hazard**

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*exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings. The internal filler must be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing/drilling holes in the bomb casing before plasma cutting.*

### **4.1 Assignment of Demilitarization Codes**

The level of demilitarization necessary is specified in the paragraphs below. The proper procedure requires that OE scrap is assigned a demilitarization code and that code determines the type of processing required. For almost all OE scrap the assigned code should be "G". The site UXO supervisor and the base explosives safety representative will assign the appropriate code when completing and signing the DD1348-1A. Consult the requirements specified in DoD 4160.21- m-1

### **4.2 Demilitarization Requirements**

Demilitarization and decontamination of OE scrap is based on a system that assigns decontamination levels commensurate with the post treatment use. For metal that is being released to the public as recyclable, 5X is the acceptable degree of decontamination.

Three Xs indicate the OE scrap has been examined and decontaminated by approved procedures and no contamination can be detected by appropriate instrumentation, test solutions, or by visual inspections on easily accessible surfaces or in concealed housings, etc. and is considered safe for the intended use. Items decontaminated to this degree cannot be furnished to qualified DoD or Industry users or subjected directly to open flame cutting, welding, high temperature heating devices), or operations which generate extreme heat, such as drilling and machining. Newly implemented certification procedures require two signatures for certification, of which only one signature may be from a government contractor if demilitarized or decontaminated items are to be hauled off site as scrap.

The only acceptable way to get to 5X decontamination is by partial or complete removal, neutralization, or destruction of explosives/explosive residue by flashing, steaming, neutralization, or other approved desensitizing methods such as shredding.

#### **4.2.1 Ammunition - Method and Degree of Required Demilitarization**

- **Artillery/Mortar Ammunition Components and Similar Items of All Types** including but not limited to high explosive, practice, inert loaded, incendiary, and smoke fillers. Remove explosive filler from projectile (wash out, burn out, etc.). Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Burn propellant unless otherwise instructed to retain for sale or other purposes. Deform fin assembly threads or fin blades. Cartridge cases will be deformed by off-center punch-out of primer or split case neck or puncture the lower sidewall with a minimum of 3/4 inch hole or deform lower sidewall, which will prevent chambering, or crush or press. Burn out smoke mixture or detonate smoke canister.

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- **Inert Loaded Ammunition, Projectiles, and Similar Items of All Types** loaded with inert filler to simulate service item. Remove rotating band from artillery projectiles and open the closure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent reloading or resealing.  
**NOTE:** For inert loaded items (concrete, sand, plaster) a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings. For this reason, DRMOs will not accept inert loaded items unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing/drilling holes in the bomb casing.
- **Category III Ammunition and Components Which Have Been Fired or Expended and Other Non-Explosive Items.** All items will be rendered free of energetic materials prior to accomplishment of demilitarization. Range residue will be processed in accordance with the defense Material Disposition Manual, DoD 4160.21-M, Chapter 4, paragraph B.3; after all required demilitarization is accomplished.
  - **Artillery/Mortar Ammunition Components and Similar Items of All Types.** Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Score practice round with a torch, displacing a minimum of one cubic inch of metal or shear into two pieces. Deform fin assembly threads and fin blades.
  - **Inert Loaded Ammunition, Projectiles, and Similar Items of All Types** loaded with inert filler to simulate service item. Remove rotating band from artillery projectiles and open the enclosure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent relocating or resealing. **NOTE:** For inert loaded items (concrete, sand, plaster) a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings. For this reason, DRMOs will not accept inert loaded items unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing/drilling holes in the bomb casing.
  - **Other Nonexplosive Filled Items** that perform a major function essential to the basic mission of the end item. Cut, crush, or process through a deactivation furnace. Burn or cut cartridge case lines and propelling charge bags. Cut, burn, or crush aircraft and ground signal cases. Crush or detonate piezoelectric (lucky) elements.
- **Technical data** will be demilitarized by burning, shredding, or pulping.



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### **4.2.2 Category V. Military Explosives, Solid and Liquid Propellants, Bombs, Mines, Incendiary Agents, and Their Constituents - Method and Degree of Required Demilitarization**

- **Artillery/Mortar Ammunition Components and Similar Items of All Types** including but not limited to high explosive, practice, inert loaded, incendiary, and smoke fillers. Remove explosive filler from projectile (wash out, burn out, etc.). Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Burn propellant unless otherwise instructed to retain for sale or other purposes. Deform fin assembly threads or fin blades. Cartridge cases will be deformed by off-center punch-out of primer or split case neck or puncture the lower sidewall with a minimum of 3/4 inch hole or deform lower sidewall, which will prevent chambering, or crush or press. Burn out smoke mixture or detonate smoke canister.
- **Inert Loaded Projectiles, Warheads and Similar Items of All Types** loaded with inert filler to simulate service item. Remove fuze and/or spotting charge, where applicable, and burn or detonate. Remove rotating band from artillery projectiles and open the enclosure of the projectile body to expose inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent reloading or resealing.
- **Bombs and Similar Items of All Types**, including but not limited to high explosive, practice, inert loaded, incendiary and photo flash fillers, military explosive excavating devices, demolition blocks, and grenades. Demilitarization will be accomplished by removal of explosive filler in an approved manner (e.g., wash-out, burn-out, etc.) And by deforming fuze cavity threads or removing base plate by other than normal disassembly (such as sawing) or by detonation. Grenades will be demilitarized by cutting or crushing (a minimum of 75% compression) the grenade body after item has been defuzed and explosive removed or by detonation.
- **Small Explosive Items**, including but not limited to fuzes, boosters, primers, detonators, firing devices, ignition cartridges, blasting caps, grenade cartridges, tracer assemblies, and similar components. Demilitarization can be accomplished by processing through a deactivation furnace at settings of 1150 degrees at burner end and 450 to 500 degrees at stack end or by mutilation. Incendiary projectiles will normally be decored to expose and assist in the complete burning of the incendiary composition. Where decoring of projectile is not necessary, processing through the deactivation furnace is adequate. Burn out 20mm high-explosive (HE) projectiles by processing through the deactivation furnace or detonate. Processing complete small arms ammunition cartridges, all calibers, through the deactivation furnace at controlled temperatures will result in adequate demilitarization. Fuzes and boosters can be disposed of by disassembly and cutting, drilling, or punching to deform metal parts. Explosive components generated through disassembly are to be burned or detonated. Fuzes may also be processed through a deactivation furnace as a complete item when disassembly is not feasible. For grenades demilitarization may be accomplished by removal of explosive components by crushing, cutting, breaking,

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melting, burning, or otherwise to fully preclude their rehabilitation or further use as grenade components. Demilitarization may also be accomplished by detonation or burning as appropriate for the particular item involved.

- **Rocket Motors, Warheads, Components and Similar Items of All Types**, including high explosive, inert, loaded, practice and smoke. Wash out or burn out rocket warhead filler and mutilate casing by crushing or cutting by torch and deforming threaded area. Disassemble and remove or burn out rocket motor propellant and cut or crush case, and deform threaded area of cases. Rocket motors and warheads may also be detonated.
- **Mines, Anti-Personnel/Anti-Tank Explosive, Components and Similar Items of All Types** including high explosive, practice, inert loaded associated explosive components. Wash out or burn out filler and mutilate by crushing, cutting by torch, deforming threaded area or detonate. Process mine fuzes, activators, and firing devices through a deactivation furnace, burn in a cage or detonate. Mine firing such as the M56 or M61 types should be crushed, cut, or burned.
- **Ammunition and Components Which Have Been Fired or Expended and Other Non-Explosive Items.** All items will be rendered free of energetic materials prior to accomplishment of demilitarization. Range residue will be processed in accordance with the defense Material Disposition Manual, DoD 4160.21-M, Chapter 4, paragraph B.3; after all required demilitarization is accomplished.
  - **Artillery/Mortar Ammunition Components and Similar Items of All Types** including but not limited to high explosive, practice, inert loaded, incendiary, and smoke fillers. Remove explosive filler from projectile (wash out, burn out, etc.). Remove rotating band and deform fuze cavity threads or score or deform bourrelet or gas check band. Score practice round with a torch, displacing a minimum of one cubic inch of metal or shear into two pieces. Deform fin assembly threads and fin blades. Defective cartridge cases will be deformed by off-center punch-out of primer or split case neck or puncture the lower sidewall with a minimum of ¼ inch hole or deform lower sidewall, which will prevent chambering, or crush or press. Burn out smoke mixture or detonate smoke canister.
  - **Inert Loaded Ammunition, Projectiles, and Similar Items of All Types** loaded with inert filler to simulate service item. Remove rotating band from artillery projectiles and open the enclosure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent relocating or resealing. ***NOTE:** For inert loaded items (concrete, sand, plaster) a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting, or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings. For this reason, DRMOs will not accept inert loaded items unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from*

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*the cavity, removal of base plates, or by puncturing/drilling holes in the bomb casing.*

- **Bombs and Similar Items of All Types**, including but not limited to high explosive, practice, inert loaded, incendiary and photoflash fillers, military explosive excavating devices, demolition blocks and grenades. Demilitarization will be accomplished by deforming fuze cavity threads or removing base plate by other than normal disassembly (such as sawing) or by detonation. Grenades will be demilitarized by cutting or crushing (a minimum of 75% compression) the grenade body after item has been defuzed and explosive removed or by detonation.
- **Rocket Motors, Warheads, Components and Similar Items of All Types**, including high explosive, inert loaded, practice and smoke. Demilitarize casing by crushing or cutting by torch or deforming threaded area. Cut, crush case, or deform threaded area of rocket motor cases.
- **Mines, Anti-Personnel/Anti-Tank, and Similar Items of All Types** including high explosive, practice, inert loaded and associated components. Demilitarize casing by crushing, or cutting by torch, and deforming threaded area or detonate. Mine firing devices such as the M56 or M61 types should be crushed, cut, or burned.
- **Instructions For Specific Ordnance Items:**
  - **BDU-50 Practice Bomb:**
    - a. Each bomb must be inspected by qualified EOD/UXO personnel to ensure that bombs are BDU-50s and that the bomb is expended. If the EOD/UXO personnel cannot verify both fuze wells, or absence thereof, it must be opened remotely by detonation.
    - b. A 1/4-inch hole will be punched in each of the two spanner wrench receptacles, fracturing the metal to a depth in excess of 1/10 inch into the concrete filler material.
    - c. A 1/4-inch punch will be utilized to further damage the threads of the nose plate, ensuring that the plate cannot be removed and replaced.
    - d. Fins will be deformed or broken and paint will then be used to place a mark of contrasting color on the bomb or near the nose.
- **Technical data** will be demilitarized by burning, shredding, or pulping.

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### 4.2.3 Venting of OE Related Scrap

Due to the lack of QD Arc Space at IHD NSWC, OE material which is believed inert but whose contents cannot be verified without penetrating the case will be explosively vented by EODMUTWO Detachment Dahlgren at their facility in Dahlgren. This will necessitate transport of the items to Dahlgren Divisions NSWC. IHD NSWC will arrange for this procedure. Once vented and determined inert appropriate demil procedures can be accomplished.

Prior and current practices have taken this to mean that if the OE item is intact and resembles a piece of military ordnance, such as a 105mm High-Explosive Anti-Tank (HEAT) (Practice) projectile, it should have a hole punched through the side to expose the filler as non-explosive. This is typically accomplished through the use of a shape charge attack. The explosively created hole exposes the filler and disfigures the projectile so that it could not be used again. For a 105mm HEAT (Practice) round this approach is sufficient because the projectile never contained any explosives or energetic material used as a spotting charge. For a MK- 82 Low Drag General Purpose (LDGP) Bomb (Practice) this approach may not be sufficient because the bomb can contain various types of explosively activated spotting charges that have the capability to cause injury or death if exposed to the right elements such as flame from a cutting torch. And there is always the possibility that a shape charge attack may punch a hole in an explosive ordnance item exposing the filler but not causing a detonation. Because some explosive fillers look like inert fillers the possibility for mis-identification and improper certification is real.

UXO known or suspected to be inert (filled with an inert substance to simulate the weight of an explosive filler) will be explosively vented with conical-shaped charges. For the purpose of determining the fragmentation hazard area for explosive venting, it will be assumed that the UXO has an explosive filler and that a high-order detonation will occur. Venting will be considered successful when the inert filler is exposed. The vented inert ordnance item can be treated and disposed as scrap after the venting and demilitarization process is complete.

### 5.0 Certification/Disposal of Scrap Metal

The generating activity will ensure that the quantities of demilitarized property turned in to the DRMO are accurate and that these quantities are readily verifiable by the DRMO. DRMOs will not accept any property unless the Department of Defense (DD) Form 1348-1A contains the demilitarization code or clear text statement of the demilitarization required. The generating activity is responsible for issuing a letter specifying who is authorized to sign the statement of inert certification. This letter will be kept in the project files, at the local DRMO, and with the generating activity. It must be updated as needed.

All material generated from the firing and/or demilitarization of AEDA will be rendered **free from explosives** before being referred to a DRMO for sale. All scrap metal, generated at the site, will be disposed of through the local DRMO or when appropriate and approved to a local scrap metal dealer, and will be transferred using DD Form 1348-1A. Prior to release of the material, the Senior UXO Supervisor will physically inspect the material in the containers to ensure that they are free of dangerous items or conduct demilitarization operations. The Senior UXO Supervisor will sign the certificate, typed on the DD Form 1348-1A, which states:

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"I certify that the property listed hereon has been inspected by me and, to the best of my knowledge and belief, contains no items of a dangerous nature."

or

"I certify that (identify items) were demilitarized in accordance with cite specific instructions (Appendix and Item number) that were complied with in the DoD 4160.21-M-1 and other applicable regulations."

The certification will be verified (countersigned) by a technically qualified U.S. government representative (U.S. citizen) designated by the responsible commander/generating activity.

Scrap will be segregated into like metals (mainly steel, aluminum, and mixed metal) and placed into palletized wooden shipping boxes. Each item placed into an inert-certified box will be inspected. The boxes will be filled, the covers will be nailed on, and a lead seal will be affixed. A Statement of Inert Certification will then be attached to the box. The box can then be picked up by a local scrap yard for disposal or recycling.

Using these procedures, OHM ensures that the collected scrap metal is properly inspected and classified. Our method includes three distinct inspections, which are performed by persons of increasing levels of responsibility. The first inspection is performed at the operating grid by a qualified UXO Technician, the second is performed by the supervisor responsible for the operating grid, and the final inspection is performed by the Senior UXO Supervisor who is vested with overall responsibility.

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***ATTACHMENT B***  
***UXO TRANSPORTATION PROCEDURES***

**Enclosure 8. UXO Support Plan**

**Unexploded Ordnance (UXO) Transportation Procedures  
For  
UXO Support at IHDIV-NSWC Indian Head, Maryland**

**October 2002**

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### ***List of Acronyms***

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CEHNC	U.S. Army Engineering and Support Center, Huntsville
CFR	Code of Federal Regulations
DoD	Department of Defense
DOT	Department of Transportation
EPA	Environmental Protection Agency
HAZMAT	Hazardous Materials
HE	High-Explosive
IHDIV-NSWC	Indian Head Division – Naval Surface Warfare Center
OE	Ordnance Explosives
Shaw E&I	Shaw Environmental and Infrastructure, Inc.
SOP	Standard Operating Procedure
UXO	Unexploded Ordnance

## **Enclosure 8. UXO Support Plan**

### **1.0 Purpose**

This Standard Operating Procedure (SOP) is intended to guide Shaw Environmental and Infrastructure, Inc. (Shaw E&I) UXO Specialists in the procedures for safely transporting demolition materials and unexploded ordnance (UXO).

The general criteria and procedures detailed in this plan will be augmented by state and local regulations as appropriate as well as Base procedures. Basic procedures for transportation of demolition materials and the recovery and transportation of UXO for storage and disposal are outlined in this section.

### **2.0 UXO Transportation Regulations**

The following guidance and regulations are applicable:

- DoD 6055.9-STD – Department of Defense (DoD) Ammunition and Explosives Safety Standards
- EM 385-1-1 - Army Corps of Engineers Safety and Health Requirements Manual
- U.S. Army Engineering and Support Center, Huntsville, (CEHNC) "Basic Safety Concepts and Considerations for UXO Operations."
- ATFP 5400.7 - Alcohol, Tobacco, and Firearms Explosives Laws and Regulations
- 27 Code of Federal Regulations (CFR) Part 55 - Commerce in Explosives
- 49 CFR Part 100 - 199 – Transportation
- DA Pam 385-64 - Ammunition and Explosives Safety Standards
- Selected EODB Publications.

### **3.0 Transportation of OE/UXO**

On-site transportation of recovered UXO will be performed in support of UXO/OE characterization and removal activities in compliance with 49 CFR Parts 100 through 199. Routes from Site 41 to the designated magazine will be established by Base Safety Department for movement of recovered ordnance explosives (OE) that the UXO team has determined safe to move. Any deviation from the routes should be treated as a change to the work plan and properly approved. This procedure is intended to eliminate the possibility of being unable to locate a disabled explosives-laden vehicle.

Recovered military munitions or UXO will not be moved unless safe to do so. Movement of UXO is the last consideration and only performed when the two UXO specialists can make a positive identification that the munition is unfuzed and safe to move. The following transportation rules are to be followed:

- Per the requirements of 49 CFR 172 Subpart H – Training, all personnel who meet the Department of Transportation's (DOT) definition of "hazmat employee" for this project will fulfill the training requirements outlined in the Subpart, including General Awareness/Familiarization Training, Function-Specific Training, and Safety

## **Enclosure 8. UXO Support Plan**

Training. Requirements found in 49 CFR 177.816 for driver training will be fulfilled as applicable.

- The subcontractor supplying trucks and drivers is subject to the DOT Registration Program requirements per 49 CFR 107 Subpart G.
- The driver of any explosive-laden vehicle will ensure that the load is properly braced and that the initiators are carried separately from main charge explosives.
- The vehicle used to transport the safe-to-move UXO items will have a non-sparking bed liner, and all explosive loads will be covered prior to departure.
- The UXO Supervisor will ensure that the driver and any passengers are not carrying any smoking products or flame producing devices. Smoking is strictly forbidden by all personnel involved in the handling or transportation of UXO items.
- All vehicles transporting UXO items will be equipped with reliable communications, a first aid kit, and two 10-pound (lb) BC fire extinguishers.
- Drivers transporting UXO items on roads that are not controlled by the U.S. Government must possess a valid commercial drivers license with a hazardous materials (HAZMAT) endorsement.
- If loose pyrotechnic, tracer, flare, and similar mixtures are to be transported, they shall be placed in #10 mineral oil or equivalent to minimize fire and explosion hazards.
- If an unfired rocket motor must be transported, it shall be positioned in such a manner as to offer the maximum protection to personnel in the event of an accident.
- If base-ejection type projectiles must be transported to a disposal area or collection point, the base will be oriented to the rear of the vehicle and the projectile secured, in the event the ejection charge functions in route.
- If an UXO, with exposed hazardous filler (HE, etc), has to be moved to a disposal area, the item shall be placed in an appropriate container with packing materials to prevent migration of the hazardous filler. Padding should also be added to protect the exposed filler from heat, shock, and friction.
- Vehicles transporting UXO items will be inspected daily when in use and the inspections will be documented. A DOT Form DD626 will be completed prior to transportation onto public roadways.

In addition to the procedures cited in the above, the following actions will be taken to maintain regulatory compliance whenever UXO items are being transported over public roads:

## **Enclosure 8. UXO Support Plan**

- A hazardous waste manifest will be used (generator number required) and will be reviewed by the P2 and C lead.
- The transporter must have an Environmental Protection Agency (EPA) identification number
- Reporting requirements in the event that a signed manifest is not received from the transporter and the storage location within 45 days will be complied with.
- The UXO will be properly classified, packaged, marked, labeled, placarded, and shipping papers prepared as specified in 49 CFR 172 and 173.
- Emergency response information and an emergency response telephone number will be supplied with the shipments according to 49 CFR 172 Subpart G.

Enclosure 9  
Frank James' Resume

01/13/03 MON 11:01 FAX 301 743 6738

ORDNANCE DEPT.

0001

*For Frank James*

Frank James, OSH/UXO Inspector, code 042 for Indian Head NSWC

Navy career  
1974- EOD School Indian Head- 6 months (incl: 1 day underwater trng)  
1975- EOD School Indian Head  
1978- Chemical Decontamination School Marine Corp  
1981 Sept-1987 Instructor for EOD School Indian Head; Air Ordnance Division  
1989 Navy Retire *1987 JAN USMC Retired*

1989 VSE- NSWC Indian Head; Cartridge Activated Devices (CAD) testing  
Canopy removers, bomb ejectors, boat ejectors, cutting cables

1991 Federal NAVY Civilian Employee GS 018/ OSH/UXO specialist,  
Code 042 NSWC Indian Head

OP5	1989	Explosive Safety Course
S-000-0025	13-17 May 1991	Basic Naval Explosive Hazard Control
S-000-0031	18-21 Nov 1991	Electrical Explosive Safety (Facilities)
S-000-0022-OS	10-14 May 1993	Naval Motor Vehicles & Railcar Inspection Course (EXPLOS)
AMMO-C-35-OS	23-26 Jan 1996	Hazard Analysis Ammunitions Operations

*1986 (DEC) Terminal leave from USMC.*

*1986-1988 VSE*

*1988-1989 ATI*

*1989-1991 CAD (POS)*

## Enclosure 9 Frank James' Resume

Frank James

317-50-7529

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### EDUCATION

Charles County Community College, MD (78, 87, 88, 90)  
Onslow Community College, NC (81)  
University of Maryland Far East (78,79)  
Jeffersonville High School (65)

### EXPERIENCE:

- **Occupational Safety & Health/Explosive Safety Specialist, Naval Surface Warfare Center, Indian Head, MD 1991-Present.** Senior specialist evaluating and monitoring the overall safety explosive hazards, occupational and industrial trades. Conduct surveys, inspections, injury/illness/mishap investigations, and special studies to determine adherence to federal, DOD and Navy regulations. Provide guidance on exposures; reviews facility drawings and specifications for environmental controls, illumination levels. Evaluates workplaces and equipment to determine environmental health risks. Responsible for coordinating and administering the Safety Standdown throughout (1991-1999) IHDNSWC. Program Manager for Confined Space Program and Safety Training Program.
- **Logistics Management Specialist; CAD Fleet Support, Maintenance Support Branch, Naval Ordnance Station, Indian Head, MD; Supervisor; Susan Finuf, 301-743-4606. 1989-1991.** Conducted Engineering Investigations on Cartridge Actuated Devices (CADs) that are either damaged or failed to function in the Aircraft. Managed the CAD F/A-18 Aircraft Logistics Management Program. Entailed preparing a technical manual on cartridges used in the F/A-18 system and keeping track of all cartridges in stock and in production. Maintained contact with MCAIR representatives to add any new additions that were needed to the aircraft. Managed Army CAD manuals and funding for this program. Provided technical source data to update manuals as required and acted as liaison with the army personnel to resolve technical data discrepancies.
- **Data Management Specialist; EMHART ATI, 801 North Strauss Avenue, Indian Head, Md; Supervisor, 301-753-9194; 1988-1989.** Provided logistic support to Naval EOD Tech Center by developing a Technical Maintenance Overhaul and Repair Standard (TRS) manual for the MK16 MOD 0 Underwater Breathing Apparatus (UBA). Prepared the TRS in accordance with DOD-STD-2147 TRS and MIL-STD-2111\*TRS Electronic (4G Repairables). Using expertise from former Navy divers on the functioning, operation and disassembly and reassembling of the MK16 UBA numerous times, plus input from data sources, able to develop the preliminary TRS into a finished form-including type, format, forms, diagrams, flow charts and illustrations. This included analyzing source data and determining appropriate coverage. Provided logistic support to naval Ordnance Station, Indian Head by editing and proofing draft copy Special Job Procedures (SJP's), Minor Procedure Changes (MCP's) and integrated Process and Inspection Instructions (IPI's). Developed draft on Second Source qualification schedule for the newly completed SM-2 components and the All-up-Round in support for acquisition management to issue uninterrupted procurement of Standard Missiles to meet AEGIS combatant ship requirements.
- **Data Management Specialist; VSE Corporation, 801 North Strauss Avenue, Indian Head, MD; Supervisor; John Bellinger, 301-753-9201; 1986-1988.** Provided logistic support to the Naval Ordnance Station, Indian Head, MD and similar activities for equipment such as cartridge actuated devices, aircrew escape propulsion systems and rocket motors. Technical writing of reports with Depot Rework Specifications (MIL-STD-2177), Maintenance Plans (MIL-STD-1388), Integrated Logistics Support Plans (NAVSEA Notice 5000.39) and Level of Repair Analysis Reports (MIL-STD-1390). Acquired source data through independent research, such as discussions with Technicians, Engineers, reviewing and analyzing engineering blue prints, drawings, sketches and other Logistics

## Enclosure 9 Frank James' Resume

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- Support Analysis when data is otherwise not available. Performed analyses for and developed Integrated Logistic Support Plans, Level of Repair Analysis, Maintenance Plans, Depot Rework Specifications and related analysis and documents, and provided assistance to other logistics analyses. Acquired source data by discussions with Integrated Logistic Support Team members, performing analyses in areas such as failure modes, effects, maintainability, and cost.
  
- **Explosive Ordnance Disposal Instructor; Marine Corps Detachment, NAVEODS, Indian Head, MD; Supervisor: Maj. J. McClure - retired; 1981-1986.** Duties consisted of NCOIC of the Marine Corps Detachment (Supervised 4 Marine instructors and 20 Marine students), NCOIC/Instructor of the Air Ordnance Division (Supervised 14 instructors-6 Air Force, 3 army and 5 Navy). Instructed students in the operation, functioning, and rendering safe procedures on the aircraft ejection systems, missiles, bombs, dispensers, and payloads that are U.S. and foreign made. Coordinated the development of Lesson Topic Guides, new test questions, and revised Student Study Guides. Instructed the advanced refresher courses to EOD Technicians on ordnance items coming into the system. Conducted tours. Acting as Drug and Alcohol Officer, randomly administered tests to all Marine staff and students. Revised the SOP in the Air Practical Area for use of live cartridges in bomb ejection demonstrations. As a member of the Test Review Board (utilizing the EODB 60 Series publication), reviewed and approved test questions throughout the EOD school system. A member of the Student Academic Board, interviewed students with academic problems.

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**Frank James' Resume**

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**Training and Courses**

8-HR EPA AHERA Supervisor Rectification (2002)

Electrical Standards Course

Hazardous Waste operations and Emergency Response

Fall Protection Systems Course

8-HR EPA AHERA Supervisor Rectification (2001)

General Industry Safety Standards Course

Introduction to Power Point

8-HR EPA AHERA Supervisor Rectification (2000)

Confined Space Rescue

Introduction to Navy Occupational Safety and Health (Ashore) Course

Confined Space Safety Course

EPA AHERA Supervisors

Machinery and Machine Guarding Standards

Crane Safety

Construction Safety Standards

Introduction to Industrial Hygiene for Safety Professionals

Bloodborne Pathogens in the Workplace

Introduction to HAZMAT Ashore

Hazard Analysis for Ammunition Operations

Basic Mishap Investigation and Recordkeeping

Scissors Lift Safety & Operation

Lead Safety Training

Naval Motor Vehicle & Railcar Inspection Course

Electrical Explosives Safety for Naval Facilities Course

Basics of Naval Explosive Hazard Control

Integrated Logistics Support Planning



**Enclosure 9**  
**Frank James' Resume**

Frank James

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Effective Briefing Technique

Advance LOTUS 1-2-3

Intro to Microcomputer Spread Sheets

Soviet Awareness Course

Basic Applied Engineering Technology

Monitor/Survey/Decontaminate Course

Radiation Physics

Innovated Explosive Devices

Explosive Ordnance Disposal School

Safety Supervisor Course

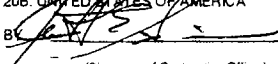
Unit Discussion Leader Course

Human relations Leadership School

Multifuel Engines School

Automotive Mechanical School

**Enclosure 10.**  
**Cover Page of Contract No. N62470-97-D-5000**

<b>AWARDS/CONTRACT</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING DO-C2	PAGE OF 1	PAGES 24
2. CONTRACT (Prog. inst. ident.) NO. N62470-97-D-5000		3. EFFECTIVE DATE SEE BLOCK 20C		4. REQUISITION/PURCHASE REQUEST: PROJECT NO.		
5. ISSUED BY  COMMANDER LANTNAVFACENGCOM 1510 GILBERT STREET NORFOLK VA 23511-2699		CODE		6. ADMINISTERED BY (if other than item 5) CODE		
7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, state and ZIP Code)  OHM REMEDIATION SERVICES CORPORATION 200 HORIZON CENTER BLVD TRENTON NJ 08691-1904  TIN: 34-1275607				8. DELIVERY  <input type="checkbox"/> FOB ORIGIN <input type="checkbox"/> OTHER (See below)		
				9. DISCOUNT FOR PROMPT PAYMENT  N/A		
10. SUBMIT INVOICES (4 copies unless otherwise specified) To THE ADDRESS SHOWN IN:		ITEM SEE SECTION G10				
CODE		FACILITY CODE				
11. SHIP TO MARK FOR TO BE DESIGNATED ON INDIVIDUAL DELIVERY ORDERS		CODE		12. PAYMENT WILL BE MADE BY Defense Financial Accounting Service Operating Location Oakland, Attn: Code FPV P.O. Box 23870 Oakland, CA 94623-0940		
13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:  <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )				14. ACCOUNTING AND APPROPRIATION DATA AA 17 98981804 KU2E 0252 62470 P 2D 975000 AA00L0000338 \$250,000.00 (minimum guarantee)		
15A. ITEM NO.	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT	
	This award constitutes acceptance of your proposal dated 29 AUG 1997 in response to solicitation N62470-97-R-5000 with Amendments 0001 through 0003. The base period shall commence on 22 JAN 1998 and continue through 30 SEP 1998. OHM's subcontracting plan dated 8-29-97 is attached and incorporated herein. SEE SECTION B				(NOT TO EXCEED)	
15G. TOTAL AMOUNT OF CONTRACT					\$20,835,000	
<b>16. TABLE OF CONTENTS</b>						
SEC.	DESCRIPTION	PAGE(S)	SEC.	DESCRIPTION	PAGE(S)	
PART I - THE SCHEDULE			PART II - CONTRACT CLAUSES			
A.	SOLICITATION/CONTRACT FORM		I.	CONTRACT CLAUSES		
B.	SUPPLIES OR SERVICES AND PRICE/COSTS		PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH			
C.	DESCRIPTION/SPEC./WORK STATEMENT		J.	LIST OF ATTACHMENTS		
D.	PACKAGING AND MARKING		PART IV - REPRESENTATIONS AND INSTRUCTIONS			
E.	INSPECTION AND ACCEPTANCE		K.	REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS		
F.	DELIVERIES OR PERFORMANCE		L.	INSTRS. CONDS., AND NOTICES TO OFFERORS		
G.	CONTRACT ADMINISTRATION DATA		M.	EVALUATION FACTORS FOR AWARD		
H.	SPECIAL CONTRACT REQUIREMENTS					
CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE						
17. <input type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract; (b) the solicitation, if any; and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)				18. <input checked="" type="checkbox"/> AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number N62470-97-R-5000 & Amendments 1-3 including the additions or changes made by you which additions or changes are set forth in full above is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) the award/contract. No further contractual document is necessary.  This award is issued pursuant to the Small Business Competitiveness Demonstration Program		
19A. NAME AND TITLE OF SIGNER (Type or print)				20A. NAME OF CONTRACTING OFFICER KEITH E. SIMMONS, DIRECTOR FACILITY SUPPORT & ENVIRON. CONTRACTS DIVISION		
19B. NAME OF CONTRACTOR		19C. DATE SIGNED		20B. UNITED STATES OF AMERICA		20C. DATE SIGNED
BY  (Signature of person authorized to sign)				BY  (Signature of Contracting Officer)		22 JAN 1998

NSN 7540-01-152-6069

26-107

STANDARD FORM 26 (REV 4-85)

## Enclosure 11. Draft Work Plan



**OHM Remediation  
Services Corp.**

2790 Mosside Boulevard  
Monroeville, PA 15146  
412-372-7701  
Fax 412-858-3979

August 15, 2002

Mr. Jeff Morris  
EFA - Chesapeake  
1314 Harwood Street  
Washington Navy Yard  
Washington, DC 20374-5018

RE: Draft Work Plan and Draft UXO Support Plan  
Remedial Action for Site 41 - Scrap Yard  
Indian Head Division - Naval Surface Warfare Center  
Indian Head, Maryland  
Contract No. N62470-97-D-5000, Task Order No. 077  
OHM Project No. 831866

Dear Jeff:

Enclosed, please find two copies of both the Draft Work Plan and Draft UXO Support Plan, prepared by OHM Remediation Services Corporation, for the above-referenced project. If you have any questions or concerns, please contact me at (412) 380-6248.

Sincerely,

*Daniel W. Pringle*

Daniel W. Pringle  
Project Manager

Cc: Dennis Orenshaw - USEPA (2 copies)  
Shawn Jorgensen - INDIV-NSWC (5 copies)  
Curtis DeTore - MDE (1 copy)  
James Dunn - Shaw Environmental, Inc. (1 copy)  
Steve Carriere - Shaw Environmental, Inc. (1 copy)  
George Latulippe - TtNUS (1 copy)  
Project File (1 copy)

## Enclosure 11. Draft Work Plan



OHM Remediation  
Services Corp.

**DRAFT  
WORK PLAN  
REMEDIAL ACTION FOR SITE 41 - SCRAP YARD  
INDIAN HEAD DIVISION - NAVAL SURFACE WARFARE CENTER  
INDIAN HEAD, MARYLAND**

**CONTRACT NO. N62470-97-D-5000  
TASK ORDER 077**

Prepared for:

DEPARTMENT OF THE NAVY  
Engineering Field Activity - Chesapeake  
Naval Facilities Engineering Command  
Washington Navy Yard, Building 212  
901 M Street, S.E.  
Washington, DC 20374-5018

Prepared by:

OHM Remediation Services Corporation  
2790 Mosside Boulevard  
Monroeville, Pennsylvania 15146-2792

Reviewed by:

---

Daniel W. Pringle  
Project Manager

---

Roland S. Moreau, PE  
Program Manager

Project No. 831866

August 15, 2002

## Enclosure 11. Draft Work Plan

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APPENDIX D – SITE-SPECIFIC HEALTH AND SAFETY PLAN  
APPENDIX E – DESIGN DRAWINGS AND SPECIFICATIONS

## Enclosure 11. Draft Work Plan

### LIST OF FIGURES

---

<u>Figure</u>	<u>Title</u>
1-1	Site Location Map
2-1	Organizational Chart
3-1	Project Schedule
3-2	Adjacent Soil Excavation Area

## Enclosure 11. Draft Work Plan

### LIST OF ACRONYMS

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<u>Acronym</u>	<u>Title</u>
CAD	cartridge actuated device
CD	compact disc
COC	chemical of concern
E&S	erosion and sediment
ECM	erosion control matting
EMHP	Excavation and Material Handling Plan
EP/PP Plan	Environmental Protection/Pollution Prevention Plan
GIS	Geographic Information System
IHDIV-NSWC	Indian Head Division, Naval Surface Warfare Center
MD SHA	Maryland State Highway Administration
MDE	Maryland Department of the Environment
mg/kg	milligram per kilogram
NTR	Navy Technical Representative
OHM	OHM Remediation Services Corporation
OSHA	Occupational Safety and Health Administration
PBA	Project Business Administrator
PCB	polychlorinated biphenyl
PPE	personal protective equipment
PRG	preliminary remediation goal
QC	quality control
QCP	Quality Control Plan
RAO	remedial action objective
ROICC	Resident Officer in Charge of Construction
Site 41	Site 41 - Scrap Yard
SSHASP	Site-Specific Health and Safety Plan
SSO	Site Safety Officer
TtNUS	Tetra Tech NUS, Inc.
UXO	unexploded ordnance



## Enclosure 11. Draft Work Plan

### **1.0 INTRODUCTION**

OHM Remediation Services Corporation (OHM) was contracted by the Navy for the remedial action at Site 41, Scrap Yard, at the Indian Head Division, Naval Surface Warfare Center (IHDIV-NSWC) in Indian Head, Maryland. This work will be performed under Contract No. N62470-97-D-5000, Task Order No. 077 and will be conducted in accordance with the remedial action design prepared by Tetra Tech NUS, Inc. (TtNUS)

#### **1.1 PURPOSE**

This draft Work Plan describes in detail the tasks to be performed during remedial activities at the Site 41, Scrap Yard (Site 41) at the IHDIV-NSWC. Included as appendices to this plan are the following:

- Appendix A - Excavation and Material Handling Plan (EMHP)
- Appendix B - Environmental Protection/Pollution Prevention Plan (EP/PP Plan)
- Appendix C - Quality Control Plan (QCP)
- Appendix D - Site-Specific Health and Safety Plan (SSHASP)
- Appendix E - Design Drawings and Specifications

In addition to the documents listed above, an Unexploded Ordnance (UXO) Support Plan will be prepared and submitted as a separate document.

#### **1.2 PROJECT BACKGROUND**

The IHDIV-NSWC is located in northwestern Charles County, Maryland, approximately 25 miles southwest of Washington, DC. The IHDIV-NSWC provides services in energetics, ordnance devices and components, and other related ordnance engineering standards, including chemicals, propellants, and their propulsion systems, explosives, pyrotechnics, warheads, and simulators.

Site 41 is located in the southeastern portion of the IHDIV-NSWC (Figure 1-1). The scrap yard is a fenced-in concrete pad area approximately 750 feet long and 75 to 100 feet wide adjacent to Mattawoman Creek. The area south of the scrap yard is flat and contains a set of formerly used railroad tracks running along the entire length of the pad. Surface water generally runs off toward Mattawoman Creek or ponds in the flat area south of the scrap yard and eventually infiltrates into the subsurface. The area north of the scrap yard is steeply sloped and wooded. Runoff from the north area flows toward the scrap yard and Mattawoman Creek. The concrete pad contains a 3- to 4-foot high vertical concrete wall along the south side of the pad. It is covered with soil and a variety of scrap metal in some places. The scrap yard is actively used to store metal materials and scraps, which are eventually sold to be reused or recycled. Existing conditions of the site are shown on Sheet C-1 of the Design Drawings.

The site has been a scrap yard since at least the 1960's. In 1981, 17 transformers stored at the site were identified as either containing or were contaminated with polychlorinated biphenyls (PCB). The transformers were believed to have leaked and contaminated the soil in the western portion of the site. Additionally, lead batteries that were stored at the site may have leaked lead to the surface soil. No transformers or batteries are currently stored in the site, but soil stains are visible where they were previously located.

## Enclosure 11. Draft Work Plan



OHM Remediation  
Services Corp.

### ***INTRODUCTION***

#### **1.3 GENERAL SCOPE AND OBJECTIVES**

The objective of this plan is to present all necessary information to perform the remediation activities at Site 41 in a safe and efficient manner according to the design documents. The selected remedy for Site 41 includes contaminated soil removal, land use controls that restrict the use of land and shallow groundwater, and periodic monitoring. The purpose of the contaminated soil removal is to eliminate the possibility of exposure to human and ecological receptors. The primary remedial action objective (RAO) is to remediate soil to reduce concentrations of the COCs to below the preliminary remediation goals (PRG). The secondary RAO is to prevent residential exposure to subsurface soil and groundwater. The remedial action objectives for the TtNUS design are to remove the potential for direct contact between receptors and soil contaminants, and to prevent future residential exposure to soil and groundwater contaminants.

A description of the specific work activities for the above scope is presented in Section 3.0.

## **Enclosure 11. Draft Work Plan**

### **2.0 ORGANIZATION OF PROJECT**

---

This section discusses project labor requirements and the OHM project organization.

#### **2.1 LABOR REQUIREMENTS**

Personnel from a variety of disciplines will be utilized to form an efficient and knowledgeable team. The proposed work requires that small work crews be on site at the same time to perform all of the remediation activities. The crews will be augmented as necessary to perform the various tasks in an efficient manner.

#### **2.2 MANAGEMENT APPROACH TO CONSTRUCTION**

OHM's approach to project management is to place the management at a level close to the client. OHM's Project Manager will work directly with the client to achieve the client's satisfaction with the project. Therefore, the Project Manager will have overall project responsibility to the client from a schedule, cost, and resources aspect. OHM will assign a Site Superintendent to be responsible for accomplishing the work in the field. The Site Superintendent will report directly to the Project Manager and will be responsible for the day-to-day activities in the field.

#### **2.3 PERSONNEL - DUTIES AND RESPONSIBILITIES**

The following sections outline OHM's overall responsibilities for this project as well as the individual responsibilities of the project team.

##### **2.3.1 OHM Responsibilities**

The responsibilities of OHM are:

- Perform the remedial activities defined in the Work Plan, design documents, and as required under this task order.
- Prepare and submit to the Navy monthly status reports containing information regarding percentage of completion, unresolved delays (encountered or anticipated) that may affect the schedule and a description of efforts made to mitigate those delays or anticipated delays, revised construction schedule, listing of activities scheduled for the next month, and other information relating to the progress of construction as is customary in the industry.
- Initiate, maintain, and supervise all safety precautions and programs in connection with the work.
- If conflict, error, or discrepancy is found in contract documents, report to the Navy Technical Representative (NTR) in writing before proceeding to obtain a written interpretation or clarification from the Navy.
- Notify the NTR in writing of any subsurface or latent physical conditions encountered that differ materially from those specified or indicated.
- Implement the QCP and establish chain of command.
- Provide a Site Superintendent, who will not be replaced without written notice to the Navy; the Site Superintendent will be OHM's on-site representative/manager.

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- If materials or equipment, or specific means, methods, techniques, sequences, or procedures of construction are indicated in or required by the Contract Documents, furnish or utilize a substitute acceptable to the NTR if needed.
- Procure subcontractor services; submit these services to the Navy for acceptance.
- Maintain at the site two record copies of all as-built drawings, one copy of specifications, addenda, written amendments, change orders, work directive changes, field test records, field orders, and written interpretations and clarifications. Upon completion of the work, deliver these records to the Navy. At completion of the work, provide a report on the construction activities.
- Prepare submittals in accordance with the basic contract and Project Specifications.

#### **2.3.2 Responsibilities of OHM's Project Management Team**

The remedial action at Site 41 will be led by a project-dedicated team who is responsible for the management and completion of the overall project remediation. The organization chart (Figure 2-1) defines the primary "chain of command."

The Project Manager will have the overall responsibility for project efforts including technical, schedule, and budget aspects. The Project Manager will be responsible for the day-to-day management and integration of all elements of the project and will be accountable for each activity. Supporting the Project Manager as a separate entity will be the Site Quality Control (QC) Manager for technical and site monitoring functions. Also supporting the Project Manager in the field will be the Site Superintendent, Site Safety Officer (SSO), Project Business Administrator (PBA), UXO Supervisor, and other support personnel as needed.

Separate from the project management chain of command is the QC chain of command under the direction of the QC Program Manager. The Site QC Manager will report, independently of the OHM project team, as shown on the Organizational Chart on Figure 2-1.

Responsibilities and authority of the Project Manager and supporting field personnel fundamental to the project are discussed in the following sections.

#### **2.3.3 Project Manager**

The Project Manager is the person in charge of the overall project and has full authority for coordination and direction of the project. The Project Manager will communicate directly with the NTR. Specific responsibilities of the Project Manager include the following:

- Interpret and plan overall work effort.
- Approve work products, plans, and deliverables.
- Responsible for preparation and planning of documents for the work.
- Respond to resource requirements by defining resource needs and securing the commitments for staff and equipment.
- Monitor subcontractor performance, schedules, budgets, and invoices.
- Develop, review, and meet work schedule and budget objectives.
- Ensure technical adequacy of field, laboratory, data management, and construction activities.
- Prepare for and attend meetings with the Navy, as required.
- Manage and coordinate group interfaces.
- Document the need for contract modifications, if needed.

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To carry out these functions, the Project Manager will have the authority to:

- Make work assignments for project personnel and subcontractors.
- Allocate additional personnel as needed.
- Establish work budgets and schedules with milestones.
- Approve subcontractor work and invoices.
- Communicate with the Site Superintendent about day-to-day activities and alert the Program Manager and/or Site QC Manager to potential problems.
- Maintain OHM quality standards.

#### **2.3.4 Site Superintendent**

The Site Superintendent is the OHM contact at the site and is responsible for performing the remediation activities in accordance with the Work Plan and other project plans and specifications. The Site Superintendent's responsibilities include, but are not limited to:

- Implementing the day-to-day aspects of the SSHASP.
- Coordinating engineering activities at the site as directed by the Project Manager.
- Managing the day-to-day execution of the project at the site including administrative and procurement activities.
- Monitoring work progress and schedule, and advising Project Manager of variances.
- Implementing state and federal regulations pertinent to the work.
- Assisting in preparation of work progress schedules, project reports, "as-built" drawings, and required compliance submittals.
- Compiling the daily logs into a weekly report, which will be forwarded to the Project Manager.
- Attending work progress meetings.
- Reporting to the Project Manager changes desired in the Contract Documents so that required review and approval can be accomplished prior to when the change is made, and reporting for review and approval changes necessitated by unanticipated site conditions.
- Procuring, with approval of the Project Manager, subcontractor services.
- Ensuring that remedial work is subjected to the same quality requirements as the original work.

#### **2.3.5 Site QC Manager**

The Site QC Manager will be responsible for coordinating inspection and surveillance activities. The Site QC Manager will conduct daily inspections and/or surveillance to monitor completion and corrections of work performed on site. The results of inspections and surveillance will be documented in a report describing the events reviewed that day. The Site QC Manager will also be responsible for:

- Coordinating day-to-day technical activities.
- Reviewing results of on-site verification testing and inspection reports.
- Implementing appropriate provisions of this plan.
- Serving as the collection point for remediation-related nonconformance.
- Performing, or causing to be performed, daily inspections and tests of the scope and character necessary to achieve the quality of construction outlined in the plans and specifications for work under the contract performed on or off site.

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- Maintaining the latest applicable drawings and specifications with amendments and/or approved modifications at the job site and assuring that they are used for shop drawings, fabrication, construction, inspections, and testing.
- Maintaining marked-up drawings at the site depicting as-built conditions. The drawings will be available for review by the government at all times.
- Holding and presiding over biweekly quality review meetings of the site work being performed, and reviewing proposed work procedures and type of work scheduled.
- Maintaining a contractor-generated submittal register, ENG Form 4288, for the duration of the contract. A review of the register will be performed at least every 14 days in conjunction with the scheduled dates on the register and in relation to the actual work status. Appropriate actions will be undertaken should slippages or other changes be necessary.
- Reviewing shop drawings and/or other submittals for compliance with the contract requirements prior to their transmission to the government.
- Establishing and maintaining a Rework Item List of work that does not conform to specifications. Tracking and monitoring the items on the list to assure the rework inspection and testing activities and frequencies are in accordance with the contract requirements.
- Attending and assisting the government at the pre-final inspection and the final acceptance inspection.
- Confirming the quality and quantity of materials delivered to the site as referenced by the Project Specifications and/or Design Drawings.

#### **2.3.6 Site Safety Officer**

The SSO is responsible for implementing the SSHASP, which satisfies federal, state, and local regulations and is consistent with site conditions. The SSO may take actions independent of the project group to stop the project, if required, for compliance with the SSHASP.

The Site Superintendent has overall responsibility for the day-to-day implementation of the SSHASP during site activities, however, the SSO will oversee this day-to-day implementation, including the following responsibilities:

- Directing the entrance and exit medical physical requirements, if required.
- Approving personal protective equipment (PPE) and safety procedures specified in the SSHASP.
- Overseeing the maintenance and use of field monitoring equipment necessary to define on-site hazards associated with remediation.
- Designating appropriate personal protection level, determining protection level upgrades and downgrades as site conditions permit.
- Providing necessary guidance to the project staff so they can safely perform their functions in accordance with federal and state regulations.

#### **2.3.7 Project Business Administrator**

The responsibilities of the PBA are:

- Assist the Project Manager in preparation of schedules, budgets, and invoices.
- Establish tracking systems to track costs and budget variances.
- Provide weekly progress reports on budget and schedule status to the Project Manager.
- Prepare daily report deliverables.

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- Audit weekly postings of charges to work budgets.
- Assist the Project Manager in communicating work procedures and goals to OHM's staff.
- Assist the Site Superintendent in procurement activities.

#### **2.3.8 Senior UXO Specialist**

The Senior UXO Specialist will monitor all excavation activities where a potential exists of uncovering UXO related items. He will be supported in the field by a UXO technician. He directly controls the excavation operations and will spend most of the day at the excavation monitoring the soil removal in order to achieve maximum operational safety and efficiency. He will implement the approved UXO Support Plan in the field and will review any changes proposed to the approved plan. The Senior UXO Specialist can temporarily stop work in order to correct unsafe conditions or procedures.

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### **3.0 DESCRIPTION OF ACTIVITIES**

This section discusses in detail the major field activities associated with the remediation of Site 41. These activities include:

- Mobilization and site setup
- Site preparation
- E&S controls installation
- Monitoring well abandonment
- Clearing and grubbing
- Pad soil removal
- Concrete pad cleaning
- Railroad track removal
- Adjacent soil removal
- Backfilling
- Road foundation and pavement
- Site restoration
- Removal of temporary facilities
- Site inspections
- Demobilization
- Closeout report.

The sequencing and duration for each of these activities as well as other related activities, is shown on the project schedule (Figure 3-1).

#### **3.1 MOBILIZATION AND SITE SETUP**

OHM will mobilize personnel, equipment, and resources necessary to complete the project as defined in this Work Plan, the Project Specifications, and the Sequence of Construction on Sheet C-3 of the Design Drawings of Appendix E. Initially, key individuals and equipment will be dispatched to the site to receive trailers and other equipment essential to perform the project. Initial site setup will include preparing an area where the Contractor's trailers will be located, installing the Contractor's trailers, including one or two office trailers and a storage trailer, and connecting utilities.

Upon completion of the initial site setup, OHM will continue mobilization. This will include mobilization of excavation, grading, and hauling equipment and all other equipment and personnel necessary to complete the project. Support facilities, including sanitation facilities, trash dumpsters, and staging areas, will be setup and additional support facilities will be installed if and when they are needed. The project needs and logistics will be coordinated through OHM's Pittsburgh, Pennsylvania and Windsor, New Jersey offices.

#### **3.2 SITE PREPARATION**

Once mobilization and site setup are complete, site preparation activities will begin.



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### ***DESCRIPTION OF ACTIVITIES***

#### **3.2.1 Utility Search**

OHM will request a utility mark out from the Resident Officer in Charge of Construction (ROICC) NTR prior to beginning ground disturbance activities. A dig permit, including a Geographic Information System (GIS) map of the area, will be obtained from the Public Works Department. In addition, OHM will conduct a utility search using two passive detection methods. A field inspection to verify the locations and depths of utilities will be conducted to prepare the site for construction operations. All utilities will be adequately marked and protected before any earth-disturbing activities. It is not anticipated that any above or below ground utility will require relocation due to the proposed remedial action.

#### **3.2.2 Initial Site Survey**

OHM will perform a topographic survey of the existing conditions at Site 41 to confirm that its current condition conforms to the lines and grades shown on Sheet C-1 of the Design Drawings. A registered surveyor will perform the initial topographic survey as well as establish construction control points and mark the limits of disturbance. Other survey work may be included as determined by the Site Superintendent.

#### **3.2.3 Delineation of Work Zones**

OHM will mark all work zones in accordance with Occupational Safety and Health Administration (OSHA) guidelines and the SSHASP of Appendix D. All specific work zones will be delineated with orange plastic safety fencing with metal posts and appropriate warning signs will be strategically placed. Caution tape, roping, and other fencing devices will be used, as specific project tasks require.

#### **3.2.4 Fence Removal**

The existing chain-link fence located along the southern end of the scrap yard will be removed to facilitate the remedial action work. This fence is in relatively poor condition and will probably not be able to be used for reinstallation at the end of the project. Therefore the fencing and support posts will be removed and placed in a roll-off container for delivery to a scrap metal recycler.

#### **3.2.5 Dust Control**

A water truck with a sprinkler attachment or other similar equipment will be utilized to control dust in all excavation/placement areas and haul roads and during placement of material. The water source for the truck will be determined by the ROICC. Water will be applied in sufficient quantity to prevent the creation of dust, but excessive watering that may result in a muddy condition will not be permitted. Determination of the need for dust control will be the responsibility of the Site Superintendent as dictated by changes in site conditions on a continuing basis.

#### **3.2.6 Air Monitoring**

OHM will perform perimeter air monitoring in accordance with the SSHASP. Air monitoring will start with the intrusive activities and continue through placement of the general fill layer. The SSO will be responsible for monitoring and maintaining the monitoring equipment on a daily basis.

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### ***DESCRIPTION OF ACTIVITIES***

#### **3.3 EROSION AND SEDIMENT CONTROLS**

This section describes the various erosion and sediment (E&S) controls that will be used during remediation activities at the site. All controls will comply with the manufacturer's installation specifications and will be installed as directed by the Site Superintendent in accordance with Sheets C-2, C-3, and C-5 of the Design Drawings. All E&S control structures will remain in place until vegetation is established and authorization to remove them is obtained from the Maryland Department of the Environment (MDE).

The installation of E&S control measures will allow earth moving activities to take place while minimizing any threat to the adjacent waterways. Work covered under this task includes installation of silt fence, a stabilized construction entrance, a decontamination pad, straw bales, a soil barrier, and vegetation. The maintenance of these structures for the duration of the remediation project is included as part of this task.

##### **3.3.1 Silt Fence**

Silt fence will be installed at the location shown on Sheet C-2 of the Design Drawings and wherever deemed necessary by the Site Superintendent. At a minimum, silt fence will be installed as shown along the southern extent of the excavation to protect the shoreline of the Mattawoman Creek during excavation activities. It will be installed in accordance with Detail 1 on Sheet C-5 as part of the site preparation work. The silt fence will be inspected weekly and after each rain event for undermining, deterioration, and accumulation of sediment. Sediment will be removed if it causes bulging of the geotextile or accumulates to half the height of the silt fence. The silt fence will remain in place until the areas it protects are stabilized and approval for removal is obtained from the MDE. Any accumulated sediment that is removed will be stockpiled for off-site disposal with the other soil.

##### **3.3.2 Stabilized Construction Entrance**

To reduce the amount of soil transported onto paved public roads by motor vehicles or runoff, a stone pad with a filter fabric underliner will be constructed at the point of vehicular ingress and egress to the work area. The construction entrance will be installed in the location shown on Sheet C-2 and in accordance with Detail 2 on Sheet C-5 of the Design Drawings. The construction entrances will be inspected regularly and new stone will be added as necessary or existing soil will be washed off, so that the stone at the entrance will perform its intended function of removing soil from the vehicle tires. No other points of egress off the site will be permitted.

##### **3.3.3 Decontamination Pads**

Decontamination pads will be installed in accordance with Detail 4 on Sheet C-5 of the Design Drawings at locations chosen by OHM and approved by the ROICC and MDE. The pads will be used to decontaminate equipment and metal scrap materials before they leave the site. Water used in the decontamination process will be collected and stored for disposal.

##### **3.3.4 Portable Sediment Tanks**

Decontamination and sediment water will be sent through the portable sediment tanks shown with Detail 3 on Sheet C-5 of the Design Drawings. These tanks will allow any solids temporarily suspended in the water to settle out. The water and sediment will then be tested (if necessary) to determine an appropriate disposal method. In the event that the water and sediment can be discharged on the site, the

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water will be broadcast over an approved vegetated area of the site and the sediment incorporated into the backfill material. If the water and sediment require off-site treatment and disposal, they will be sent to an appropriate facility.

#### **3.3.6 Straw Bales**

Straw bales will be placed on both sides of the access road east of the site at the intersection of the access road and the drainage channel. Straw bales will be installed in accordance with Detail 5 on Sheet C-5 of the Design Drawings. They will intercept the sediment from the runoff from the access road. Sediment collected by the straw bales will be removed and stockpiled for disposal when the sediment reaches half of the original height of the straw bale. The straw bales will remain in place throughout construction and will be removed once permanent vegetation has been established.

#### **3.3.7 Soil Barrier**

A temporary soil berm will be installed where needed on the concrete pad to help direct surface runoff for collection. It will direct water to portable sediment tanks, where the sediment will be allowed to settle out. The water will then be contained and characterized for disposal. The soil berm will be inspected regularly for sediment accumulation or damaged areas where runoff may break through. A vertical concrete wall exists along the pad where the soil barrier is to be installed. If the structural integrity of the wall is good, the wall will act to direct surface runoff. If so, then the soil berm will not be necessary for this area.

#### **3.3.8 Vegetation**

Temporary seeding may be utilized during construction activities to temporarily stabilize disturbed areas that remain disturbed for more than 30 days without any work being performed in the specific area. The temporary seeding (if required) will conform to the specifications listed on Sheet C-4 of the Design Drawings. Permanent seeding, mulch, and/or plantings will be placed as described in Section 3.12, Site Restoration.

### **3.4 MONITORING WELL ABANDONMENT**

Three monitoring wells within the limits of disturbance as shown on Sheet C-2 of the Design Drawings will be abandoned prior to soil excavation. A driller licensed in the state of Maryland will be subcontracted to abandon the wells in accordance with state requirements and provide certification.

### **3.5 CLEARING AND GRUBBING**

OHM personnel will perform the clearing and grubbing in the support areas and the excavation areas once the E&S controls are installed. Clearing will consist of the removal of aboveground vegetation. Grubbing will consist of the removal of stumps and root systems within the limits of disturbance. All cleared and grubbed material will be chipped and placed in roll-offs to be sent off site for disposal.

### **3.6 PAD SOIL REMOVAL**

Prior to removing and screening contaminated soil located on the pad, the large pieces of metal (excluding UXO items) that still remain on the pad will be removed and staged on the pad for processing. The metal pieces that will be removed during this process will be all things that cannot fit inside the front-

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end loader or excavator bucket or do not need to be processed through the mechanical screener. The processing of these items will include removing any residual soil from each item, pressure washing or brooming (if necessary), then placing the item into an appropriate roll-off supplied by the Base or staging the item on a clean section of the concrete pad.

Soil on the concrete pad will be removed, screened, and staged for off-site disposal. Prior to any earth moving, a UXO technician will perform a visual search of the area for UXO. Once any visual UXO have been removed, excavation, screening, and staging of the soil will begin. A UXO technician will observe all excavation activities and remove and stockpile the safe-to-move UXO items, including the cartridge actuated devices (CAD), for EOD personnel to pick up. Specific procedures for the identification, moving, and disposal of UXO items are discussed in the UXO Support Plan, submitted separately. It is estimated that 1,350 cubic yards of soil will be removed from the pad. Chemical testing will be performed to determine the transportation and disposal requirements of the soil. Depending on the condition of the pad soil after the scrap metal is removed, the soil may be systematically sampled prior to screening. Otherwise the screened soil will be placed in separate 200- to 300-cubic yard piles then sampled.

#### **3.7 CONCRETE PAD CLEANING**

Following the removal of the soil from the concrete pad, the pad will be cleaned. Cleaning will begin with push brooms to remove the residual soil not picked up by the front-end loader bucket. A high-power pressure-washer will then be used to wash the concrete. The water from the cleaning process will be sent to a portable sediment tank, where the solids temporarily suspended in the water will settle out. The water will then be transferred to a holding tank and tested to determine if it requires off-site disposal or if it can be released onto the site. The concrete pad will be pressure washed twice during the cleaning process.

After the concrete pad is pressure washed, wipe and/or chip samples will be taken from the concrete surface to determine the degree of residual PCB contamination. In addition, the concrete will be visually inspected in order to determine its condition. If the pad is sound and residual PCB contamination is present at concentrations exceeding the allowable levels of 10 micrograms per 100 square centimeters for the wipe samples or 2 milligrams per kilograms (mg/kg) for the chip samples, 2 inches of bituminous concrete pavement (or other approved cover) will be placed over the concrete to eliminate the exposure to the PCB contamination as shown in Detail 5 on Sheet C-8 of the Design Drawings.

#### **3.8 RAILROAD TRACK REMOVAL**

The abandoned rail line running along the southern perimeter of the concrete pad will be removed, including the rails, ties, and ballast. Approximately 3,030 linear feet of rail will be removed, cut, decontaminated, and staged for disposal, along with miscellaneous spikes and plates. Additionally, approximately 650 railroad ties will be removed and staged on the concrete pad for disposal. All metal will be decontaminated with a pressure washer and the rails will be cut with hydraulic shears for ease of handling and hauling to a local metal scrap dealer.

#### **3.9 ADJACENT SOIL REMOVAL**

The soil adjacent to the scrap yard will be excavated for off-site disposal. Initially, the top 6 inches of contaminated soil over the entire remediation area indicated in Figure 3-2 will be excavated (approximately 880 cubic yards, or 1,490 tons). This excavated material will be mechanically screened for CADs if necessary then staged for off-site disposal. Next, selective excavation of the remaining

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contaminated soil (hot spots) will take place (an estimated 150 cubic yards, or 250 tons). Because the CADs are only expected on or near to the surface, the soil from the deeper excavations does not require mechanical screening. During the excavation of the hot spots, verification sampling and analysis will be conducted over the previously excavated area. This verification sampling will be conducted by the TiNUS. The procedures to be followed for the verification sampling presented in the Site 41 Verification Sampling Plan. The results of the verification analysis will be used to identify areas requiring additional soil removal. These additional areas (if any) will be identified by TiNUS and after the additional excavation, additional verification samples will be collected and analyzed (if required). The railroad ballasts will be removed to a depth of 12 inches at the same time as the initial soil excavation, but will not require mechanical screening (approximately 370 cubic yards, or 680 tons).

An eight-foot excavation is required at Sample Point 13 as shown on Sheet C-6 of the Design Drawings. The excavation will be conducted by sloping back the sidewalls and the excavation is expected to terminate below the water table and dewatering will be required. This will be accomplished using trash pumps and temporarily containerizing the water until chemical analysis results can determine the appropriate means of disposal.

#### **3.10 BACKFILLING**

The areas adjacent to the scrap yard where soil is excavated will be backfilled with clean fill obtained from an off-site borrow source. Common fill will be placed in the area and spread with a dozer in 6- to 9-inch loose lifts. The lifts will be compacted to 85 percent of their maximum dry density. Topsoil will be placed as the top 6 inches of fill. Compaction of the topsoil will be incidental to its placement with no additional compaction required. Both the common fill and topsoil will be obtained from off-site borrow sources. Chemical testing for clean fill parameters will be performed on the common fill and topsoil as described in the QCP (Appendix C) before the materials are brought on site.

#### **3.11 ROAD FOUNDATION AND PAVEMENT**

A site access road will be constructed along the southern portion of the site to provide future vehicle access. The entrance to the access road, on the eastern side of the site near Hersey Road, will be paved with bituminous concrete pavement. The area will be prepared using four inches of compacted aggregate subbase placed over woven geotextile. The base and asphalt will then include 6 inches of aggregate base, 2 inches of bituminous concrete binder course, and 1 inch of bituminous concrete wearing course. The remaining portion of the road will be constructed with gravel. It will consist of 8 inches of Maryland State Highway Administration (MD SHA) graded aggregate base over woven geotextile.

#### **3.12 SITE RESTORATION**

Restoration will involve activities associated with returning the site to pre-excavation conditions as best as practical in preparation for demobilization. These actions, which include seeding and mulching the disturbed areas, replacement of removed fence, installation of new fence and a gate, and the performance of a final site survey, are discussed in detail below.

##### **3.12.1 Permanent Seeding**

Seed and mulch will be applied to all disturbed areas within the site limits. A subcontractor will apply the seed, mulch, and nutrients based on the results of the nutrient testing on the topsoil and in accordance with Sheet C-4 of the Design Drawings and the Maryland Erosion and Sedimentation Control

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Handbook guidelines. All temporary E&S control structures will remain in place while vegetation is being established at the site.

#### **3.12.2 Fence and Gate Installation**

The chain link fence that was removed from south of the scrap yard will be replaced with new fence. Additionally, chain link fence will be installed around the remainder of the concrete pad. A double leaf security gate will be installed at the eastern end of the concrete pad. The location of the fence and gate are shown on Sheet C-7 of the Design Drawings, and their details are included on Sheet C-8.

#### **3.12.3 Final Survey**

At the completion of the field activities, which involve site grading or installation/removal of structures, a final topographic survey of the project site will be conducted by a registered land surveyor. The final survey will include site topography, elevation/location of existing structures, and the elevation/location of new structures such as new monitoring wells (by others) and warning signs. The results of the final survey will be used to generate the as-built site conditions, which will be included in the Closeout Report as a hard copy and in electronic format. Pertinent survey data from the final survey will also be provided electronically in ASCII format.

### **3.13 REMOVAL OF TEMPORARY FACILITIES**

Once the remedial activities are complete, the temporary facilities, including the sanitary facilities and trash dumpsters, will be removed. The electrical and telephone lines will be disconnected from the trailers and the trailers will be removed from the site. Other temporary structures, such as the E&S controls, the containment berm, and the safety delineations will be removed when appropriate. The E&S controls will not be removed until vegetation is established. Because demobilization will have already occurred by that time, a small crew will be re-mobilized to the site to remove the E&S controls.

### **3.14 SITE INSPECTION**

A pre-final inspection will be held in anticipation of the closure of the project. The Navy will be given 14 days advance notice of the inspection. This inspection will be conducted by, at a minimum, the Site QC Manager, Site Superintendent, Base personnel, and the NTR. A complete list of deficiencies discovered during the inspection and corrections to each deficiency will be compiled.

After OHM has completed correcting any deficiencies on the pre-final inspection list, and any other deficiencies discovered after the inspection, the NTR and other involved parties will be offered an opportunity to inspect these areas before OHM demobilizes from the site. The purpose for this inspection will be to verify that the tasks detailed in the contract have been completed to the Navy's satisfaction and that all previously identified deficiencies have been rectified. At the completion of this inspection, there should be no unacceptable work remaining. The completion of this task should constitute final acceptance of the project and the maintenance period will begin on that date, which will include removing the temporary E&S controls once vegetation is established.

### **3.15 DEMobilIZATION**

OHM will demobilize labor, equipment, and materials from the site upon completion of the work activities and after having met the project objectives. Demobilization will occur in stages as various work activities are completed, and will include those activities discussed below.

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### ***DESCRIPTION OF ACTIVITIES***

#### **3.15.1 Decontamination of Equipment**

All site equipment that comes in contact with waste or contaminated materials will be decontaminated using high-pressure washing before leaving the site. The resulting decontamination water will be sampled for disposal purposes. The equipment will be decontaminated as the soil excavation is completed. Once the common fill layer is in place, the area will be designated a clean area. Any equipment decontamination from that point on will be conducted as a dry decontamination since the presence of contaminated soil on equipment will no longer be an issue.

#### **3.15.2 Site Cleanup**

Temporary utilities will be disconnected as they are no longer needed. The site will be cleaned up by removing traces of temporary construction facilities such as work areas, structures, stockpiles of excess or waste materials, and other signs of construction. Temporary roads and parking areas will be graded to conform to the surrounding contours, or left intact based on the Base needs. Seed and mulch will be applied to all disturbed areas in accordance with Sheet C-4 of the Design Drawings. The Site Superintendent will verify the site is clean and restored to a level acceptable to the ROICC before demobilizing the remaining site resources.

#### **3.13.3 Demobilization of Resources**

All equipment will be visually inspected for proper decontamination prior to leaving the site. The remaining purchased materials not utilized will be removed from the site, or stored on Base if the materials can be used in the future at the site or other Base activities. Construction equipment will be demobilized from the site as work phases are completed and the equipment is no longer needed. The equipment and materials (if appropriate) will be returned to their location of origin. After all the equipment and temporary facilities have been removed, OHM will demobilize the remaining work force from the site.

#### **3.14 CLOSEOUT REPORT**

Following demobilization, OHM will prepare a closeout report describing the activities performed for this remedial action. The report will include the following:

- Summary of action
- Final health and safety report
- Summary of Record Drawings
- Field changes and contract modifications
- Final documents
- Complete set of field test and laboratory analytical results
- Documentation of off-site transportation and treatment of materials
- QC Summary Report
- Surveyed as-built drawings
- Color photographs documenting each major task of the project
- Final cost data

The report will be submitted in hard copy and electronic format. It will be initially submitted in hard copy draft form, then the final report will be submitted in hard copy and on compact disc (CD) after

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the Navy and agency comments to the draft are addressed. The hard copy will include report text, tables, figures, as-built drawings, and photograph documentation. The electronic CD will include the hard copy contents and the other items listed above.



SITE 41  
DATE: 11/12/02  
BLDG/AREA 127

POST PERMIT ON WORKSITE  
SAFETY WORK PERMIT FOR EXPLOSIVE AREA  
INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER

EXPIRES: 02-28-03

WORK PERFORMED BY: ACTIVITY FORCES-CODE ( )

CONTRACTOR-NAME: Shaw Environmental

ADHERE TO SPECS OF CONTRACT # 97-D-5000

YES ☐ NO ☒ RE-INSPECTION OF AREA BY SAFETY INSPECTOR REQUIRED PRIOR TO BEGINNING WORK

CODE/INITIAL/DATE

DESCRIPTION OF WORK AUTHORIZED:

*Use of heavy equipment to move inert ordnance, heavy metal and soil as per contract # 97-D-5000.*

1. DECONTAMINATION OF AREA REQUIRED AS FOLLOWS:

YES ☐ NO ☒ PRIOR TO START CLEAR WORK THROUGH BLDG/AREA SUPERVISOR DAILY

- ☐ ☒ A. REMOVE ALL EXPLOSIVES FROM (SPECIFY) \_\_\_\_\_  
☐ ☒ B. REMOVE HAZARDOUS MATERIALS (SPECIFY) \_\_\_\_\_  
☐ ☒ C. WASH AREA DOWN (SPECIFY) \_\_\_\_\_  
☐ ☒ D. TREAT WITH DESENSITIZING AGENT (SPECIFY) \_\_\_\_\_  
☐ ☒ E. SECURE EXPLOSIVE OPERATIONS IN \_\_\_\_\_  
☐ ☐ F. OTHER (SPECIFY) \_\_\_\_\_

2. OPEN FLAME (HOT) OR SPARK-PRODUCING WORK (WELDING, TORCH, SOLDERING, GRINDING, ETC.) AUTHORIZED \_\_\_\_\_ NOT AUTHORIZED ☒

- YES ☐ NO ☒  
☐ ☒ A. HAVE FIRE EXTING. ON-SITE DURING HOT WORK (TYPE: \_\_\_\_\_)  
☐ ☒ B. HAVE FIRE WATCH ON-SITE DURING HOT WORK  
☐ ☒ C. STAY ON-SITE 30 MINUTES AFTER HOT WORK IS COMPLETE  
☐ ☒ D. REMOVE FLAMM./COMBUST. MATERIAL FROM HOT-WORK SITE  
☐ ☒ E. BUFFER BAY(S) REQUIRED (SPECIFY) \_\_\_\_\_  
☐ ☒ F. HOT WORK AREA TO REMAIN WET DURING WORK  
☐ ☒ G. OTHER (SPECIFY) \_\_\_\_\_

3. EQUIPMENT AUTHORIZED FOR USE

YES ☐ NO ☒

- ☐ ☒ A. TORCH/WELDER  
☒ ☒ B. POWER TOOLS (GRINDER, DRILL, SKILSAW, BACKHOB, GENERATOR, AIR COMPRESSOR) / POWER EQUIPMENT (SPECIFY) Heavy equipment  
☒ ☐ C. HAND TOOLS  
☐ ☐ D. NON-SPARKING TOOLS  
☐ ☐ E. OTHER (SPECIFY) \_\_\_\_\_

4. PERSONAL PROTECTIVE EQUIPMENT REQUIRED as per safety plan

YES ☐ NO ☒

- ☒ ☐ EYE PROTECTION (SAFETY GLASSES, GOGGLES, FACE SHIELD) as per safety  
☒ ☐ HEARING PROTECTION as per safety plan / plan  
☐ ☒ POWDER UNIFORM (COVERALLS & CAP)  
☐ ☒ CONDUCTIVE SHOES OR NO-STATS  
☐ ☒ RESPIRATORY PROTECTION (SPECIFY) \_\_\_\_\_  
☒ ☐ HAND/FOOT/HEAD PROTECTION (SPECIFY) as per safety plan  
☐ ☒ FALL PROTECTION REQUIRED (SPECIFY) \_\_\_\_\_  
☐ ☐ OTHER (SPECIFY) \_\_\_\_\_

5. ADDITIONAL REQUIREMENTS

YES ☐ NO ☒

- ☒ ☐ NOTIFY BLDG/AREA SUPERVISOR WHEN WORK IS COMPLETE  
☐ ☒ EXPLOSIVES TRANSFERS ALLOWED IN AREA DURING WORK  
☐ ☒ NOTIFY FIRE DEPT / PUBLIC WORKS UTILITIES OF WORK  
☐ ☒ LOCKOUT/TAGOUT HAZARDOUS ENERGY SOURCES (SPECIFY) \_\_\_\_\_  
☒ ☐ RE-INSPECTION OF AREA REQ'D BY SAFETY INSP UPON COMPLETION OF WORK  
☐ ☐ OTHER (SPECIFY) \_\_\_\_\_

6. OTHER:

SUPERVISOR IN IMMEDIATE AREA/DATE

SAFETY DEPARTMENT OFFICIAL/DATE

CONTRACT REPRESENTATIVE/DATE

PUBLIC WORKS REPRESENTATIVE/DATE

NDW-IHD/NAVSURFWARCEN-5100/3 (Rev. 8-98)

This permit is issued for the protection of all workers and equipment. No deviation from requirements of this permit is authorized without permission of the issuing agent. If method of work, or conditions of immediate area change, or other hazardous conditions arise during work, work will be stopped immediately and the Safety Department and/or the Fire Department will be notified. Notify the Safety Department when job is completed. All permits issued are good ONLY for the day issued and one permit will be issued daily. Deviations to conditions are noted at the end of the permit.

DO ALL WORK THE SAFE WAY

DATE: 11.12.02 127  
BLDG/AREA

POST PERMIT ON WORKSITE  
SAFETY WORK PERMIT FOR EXPLOSIVE AREA  
INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER

EXPIRES: 11.15.02

WORK PERFORMED BY: ACTIVITY FORCES-CODE ( )

CONTRACTOR-NAME: Shaw Environmental

ADHERE TO SPECS OF CONTRACT # 97-D-5000

YES ☐ NO ☐ RE-INSPECTION OF AREA BY SAFETY INSPECTOR REQUIRED PRIOR TO BEGINNING WORK

CODE/INITIAL/DATE

DESCRIPTION OF WORK AUTHORIZED:

Use of cutting torch and welder to cut inert ordnance in scrap yard for demil. Use of welder to repair heavy equipment.

1. DECONTAMINATION OF AREA REQUIRED AS FOLLOWS:

- YES ☐ NO ☒ PRIOR TO START CLEAR WORK THROUGH BLDG/AREA SUPERVISOR DAILY
- ☐ ☒ A. REMOVE ALL EXPLOSIVES FROM (SPECIFY) \_\_\_\_\_
- ☐ ☒ B. REMOVE HAZARDOUS MATERIALS (SPECIFY) \_\_\_\_\_
- ☐ ☒ C. WASH AREA DOWN (SPECIFY) \_\_\_\_\_
- ☐ ☒ D. TREAT WITH DESENSITIZING AGENT (SPECIFY) \_\_\_\_\_
- ☐ ☒ E. SECURE EXPLOSIVE OPERATIONS IN \_\_\_\_\_
- ☐ ☐ F. OTHER (SPECIFY) \_\_\_\_\_

2. OPEN FLAME (HOT) OR SPARK-PRODUCING WORK (WELDING, TORCH, SOLDERING, GRINDING, ETC.) AUTHORIZED ☒ NOT AUTHORIZED \_\_\_\_\_

- YES ☒ NO ☐
- ☒ A. HAVE FIRE EXTING. ON-SITE DURING HOT WORK (TYPE: ABC)
- ☒ B. HAVE FIRE WATCH ON-SITE DURING HOT WORK
- ☒ C. STAY ON-SITE 30 MINUTES AFTER HOT WORK IS COMPLETE
- ☒ D. REMOVE FLAMM./COMBUST. MATERIAL FROM HOT-WORK SITE
- ☐ ☒ E. BUFFER BAY(S) REQUIRED (SPECIFY) \_\_\_\_\_
- ☐ ☒ F. HOT WORK AREA TO REMAIN WET DURING WORK
- ☒ G. OTHER (SPECIFY) as per contract 97-D-5000

3. EQUIPMENT AUTHORIZED FOR USE

YES ☒ NO ☐

- ☒ A. TORCH/WELDER
- ☒ B. POWER TOOLS (GRINDER, DRILL, SKILSAW, BACKHOE, GENERATOR, AIR COMPRESSOR)/POWER EQUIPMENT (SPECIFY) \_\_\_\_\_
- ☒ C. HAND TOOLS
- ☐ ☒ D. NON-SPARKING TOOLS
- ☐ ☒ E. OTHER (SPECIFY) \_\_\_\_\_

4. PERSONAL PROTECTIVE EQUIPMENT REQUIRED per safety contract plan

YES ☐ NO ☐

- ☐ EYE PROTECTION (SAFETY GLASSES, GOGGLES, FACE SHIELD)
- ☐ HEARING PROTECTION
- ☐ POWDER UNIFORM (COVERALLS & CAP)
- ☐ CONDUCTIVE SHOES OR NO-STATS
- ☐ RESPIRATORY PROTECTION (SPECIFY) \_\_\_\_\_
- ☐ HAND/FOOT/HEAD PROTECTION (SPECIFY) \_\_\_\_\_
- ☐ FALL PROTECTION REQUIRED (SPECIFY) \_\_\_\_\_
- ☐ OTHER (SPECIFY) \_\_\_\_\_

5. ADDITIONAL REQUIREMENTS

YES ☐ NO ☒

- ☒ NOTIFY BLDG/AREA SUPERVISOR WHEN WORK IS COMPLETE
- ☐ ☒ EXPLOSIVES TRANSFERS ALLOWED IN AREA DURING WORK
- ☐ ☒ NOTIFY FIRE DEPT / PUBLIC WORKS UTILITIES OF WORK
- ☐ ☒ LOCKOUT/TAGOUT HAZARDOUS ENERGY SOURCES (SPECIFY) \_\_\_\_\_
- ☒ RE-INSPECTION OF AREA REQ'D BY SAFETY INSP UPON COMPLETION OF WORK
- ☐ ☒ OTHER (SPECIFY) \_\_\_\_\_

6. OTHER:

SUPERVISOR IN IMMEDIATE AREA/DATE

SAFETY DEPARTMENT OFFICIAL/DATE

CONTRACT REPRESENTATIVE/DATE

PUBLIC WORKS REPRESENTATIVE/DATE

NDW-IH DIV NAVSURFWAR CEN-5100/3 (Rev. 8-98)

This permit is issued for the protection of all workers and equipment. No deviation from requirements of this permit is authorized without permission of the issuing agent. If method of work, or conditions of immediate area change, or other hazardous conditions arise during work, work will be stopped immediately and the Safety Department and/or the Fire Department will be notified. Notify the Safety Department when job is completed. All permits issued are good ONLY for the day issued and new permits will be issued daily if work is to continue over a period of time unless otherwise stated.

DO ALL WORK THE SAFE

Enclosure 14.  
Hot Work Permits Dated 13 and 18 Nov 2002

DATE: 11/12/02 127  
BLDG/AREA

POST PERMIT ON WORKSITE  
SAFETY WORK PERMIT FOR EXPLOSIVE AREA  
INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER

EXPIRES: 11/15/02

WORK PERFORMED BY: ACTIVITY FORCES-CODE (

) CONTRACTOR-NAME: Shaw Environmental

ADHERE TO SPECS OF CONTRACT # 97-D-5000

YES ☐ NO ☐ RE-INSPECTION OF AREA BY SAFETY INSPECTOR REQUIRED PRIOR TO BEGINNING WORK  
DESCRIPTION OF WORK AUTHORIZED:

CODE/INITIAL/DATE

Use of cutting torch and welder to cut inert ordnance in scrap yard for demol. Use of welder to repair heavy equipment.

1. DECONTAMINATION OF AREA REQUIRED AS FOLLOWS:

- YES ☐ NO ☒ PRIOR TO START CLEAR WORK THROUGH BLDG/AREA SUPERVISOR DAILY
- ☐ A. REMOVE ALL EXPLOSIVES FROM (SPECIFY) \_\_\_\_\_
- ☐ B. REMOVE HAZARDOUS MATERIALS (SPECIFY) \_\_\_\_\_
- ☐ C. WASH AREA DOWN (SPECIFY) \_\_\_\_\_
- ☐ D. TREAT WITH DESENSITIZING AGENT (SPECIFY) \_\_\_\_\_
- ☐ E. SECURE EXPLOSIVE OPERATIONS IN \_\_\_\_\_
- ☐ F. OTHER (SPECIFY) \_\_\_\_\_

2. OPEN FLAME (HOT) OR SPARK-PRODUCING WORK (WELDING, TORCH, SOLDERING, GRINDING, ETC.) AUTHORIZED ☒ NOT AUTHORIZED \_\_\_\_\_

- YES ☐ NO ☒
- ☐ A. HAVE FIRE EXTING. ON-SITE DURING HOT WORK (TYPE: ABC)
- ☒ B. HAVE FIRE WATCH ON-SITE DURING HOT WORK
- ☒ C. STAY ON-SITE 30 MINUTES AFTER HOT WORK IS COMPLETE
- ☒ D. REMOVE FLAMM./COMBUST. MATERIAL FROM HOT-WORK SITE
- ☐ E. BUFFER BAY(S) REQUIRED (SPECIFY) \_\_\_\_\_
- ☒ F. HOT WORK AREA TO REMAIN WET DURING WORK
- ☒ G. OTHER (SPECIFY) as per contract 97-D-5000

3. EQUIPMENT AUTHORIZED FOR USE

YES ☐ NO ☐

- ☒ A. TORCH/WELDER
- ☒ B. POWER TOOLS (GRINDER, DRILL, SKILSAW, BACKHOE, GENERATOR, AIR COMPRESSOR/POWER EQUIPMENT (SPECIFY) \_\_\_\_\_)
- ☒ C. HAND TOOLS
- ☐ D. NON-SPARKING TOOLS
- ☐ E. OTHER (SPECIFY) \_\_\_\_\_

4. PERSONAL PROTECTIVE EQUIPMENT REQUIRED per safety contract plan

- YES ☐ NO ☐
- ☐ EYE PROTECTION (SAFETY GLASSES, GOGGLES, FACE SHIELD)
- ☐ HEARING PROTECTION
- ☐ POWDER UNIFORM (COVERALLS & CAP)
- ☐ CONDUCTIVE SHOES OR NO-STATS
- ☐ RESPIRATORY PROTECTION (SPECIFY) \_\_\_\_\_
- ☐ HAND/FOOT/HEAD PROTECTION (SPECIFY) \_\_\_\_\_
- ☐ FALL PROTECTION REQUIRED (SPECIFY) \_\_\_\_\_
- ☐ OTHER (SPECIFY) \_\_\_\_\_

5. ADDITIONAL REQUIREMENTS

- YES ☐ NO ☒
- ☐ NOTIFY BLDG/AREA SUPERVISOR WHEN WORK IS COMPLETE
- ☐ EXPLOSIVES TRANSFERS ALLOWED IN AREA DURING WORK
- ☐ NOTIFY FIRE DEPT / PUBLIC WORKS UTILITIES OF WORK
- ☒ LOCKOUT/TAGOUT HAZARDOUS ENERGY SOURCES (SPECIFY) \_\_\_\_\_
- ☒ RE-INSPECTION OF AREA REQ'D BY SAFETY INSP UPON COMPLETION OF WORK
- ☐ OTHER (SPECIFY) \_\_\_\_\_

6. OTHER:

SUPERVISOR IN IMMEDIATE AREA/DATE

SAFETY DEPARTMENT OFFICIAL/DATE

CONTRACT REPRESENTATIVE/DATE

PUBLIC WORKS REPRESENTATIVE/DATE

NDW-IHDIVNAVSURFWAR-CEN-5100/3 (Rev. 8-98)

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DO ALL WORK THE SAFE

Enclosure 14.  
Hot Work Permits Dated 13 and 18 Nov 2002

DATE: 11/12/02 127  
BLDG/AREA: 3112-41

POST PERMIT ON WORKSITE  
SAFETY WORK PERMIT FOR EXPLOSIVE AREA  
INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER

EXPIRES: 11/15/02

WORK PERFORMED BY: ACTIVITY FORCES-CODE ( )

CONTRACTOR-NAME: Shaw Environmental

ADHERE TO SPECS OF CONTRACT # 97-D-5000

YES ☐ NO ☐ RE-INSPECTION OF AREA BY SAFETY INSPECTOR REQUIRED PRIOR TO BEGINNING WORK

CODE/INITIAL/DATE

DESCRIPTION OF WORK AUTHORIZED:

Use of cutting torch and welder to cut inert ordnance in scrap yard for demol. Use of welder to repair heavy equipment.

1. DECONTAMINATION OF AREA REQUIRED AS FOLLOWS:

YES ☐ NO ☒ PRIOR TO START CLEAR WORK THROUGH BLDG/AREA SUPERVISOR DAILY

- ☐ ☒ A. REMOVE ALL EXPLOSIVES FROM (SPECIFY) \_\_\_\_\_  
☐ ☒ B. REMOVE HAZARDOUS MATERIALS (SPECIFY) \_\_\_\_\_  
☐ ☒ C. WASH AREA DOWN (SPECIFY) \_\_\_\_\_  
☐ ☒ D. TREAT WITH DESENSITIZING AGENT (SPECIFY) \_\_\_\_\_  
☐ ☒ E. SECURE EXPLOSIVE OPERATIONS IN \_\_\_\_\_  
☐ ☐ F. OTHER (SPECIFY) \_\_\_\_\_

2. OPEN FLAME (HOT) OR SPARK-PRODUCING WORK (WELDING, TORCH, SOLDERING, GRINDING, ETC.) AUTHORIZED ☒ NOT AUTHORIZED \_\_\_\_\_

- YES ☒ NO ☐  
☒ ☐ A. HAVE FIRE EXTING. ON-SITE DURING HOT WORK (TYPE: ABC)  
☒ ☐ B. HAVE FIRE WATCH ON-SITE DURING HOT WORK  
☒ ☐ C. STAY ON-SITE 30 MINUTES AFTER HOT WORK IS COMPLETE  
☒ ☐ D. REMOVE FLAMM./COMBUST. MATERIAL FROM HOT-WORK SITE  
☐ ☒ E. BUFFER BAY(S) REQUIRED (SPECIFY) \_\_\_\_\_  
☐ ☒ F. HOT WORK AREA TO REMAIN WET DURING WORK  
☒ ☐ G. OTHER (SPECIFY) as per contract 97-D-5000

3. EQUIPMENT AUTHORIZED FOR USE

YES ☒ NO ☐

- ☒ ☐ A. TORCHWELDER  
☒ ☐ B. POWER TOOLS (GRINDER, DRILL, SKILSAW, BACKHOE, GENERATOR, AIR COMPRESSOR)/POWER EQUIPMENT (SPECIFY) \_\_\_\_\_  
☒ ☐ C. HAND TOOLS  
☐ ☒ D. NON-SPARKING TOOLS  
☐ ☒ E. OTHER (SPECIFY) \_\_\_\_\_

4. PERSONAL PROTECTIVE EQUIPMENT REQUIRED per safety contract plan

YES ☐ NO ☐

- ☐ ☐ EYE PROTECTION (SAFETY GLASSES, GOGGLES, FACE SHIELD)  
☐ ☐ HEARING PROTECTION  
☐ ☐ POWDER UNIFORM (COVERALLS & CAP)  
☐ ☐ CONDUCTIVE SHOES OR NO-STATS  
☐ ☐ RESPIRATORY PROTECTION (SPECIFY) \_\_\_\_\_  
☐ ☐ HAND/FOOT/HEAD PROTECTION (SPECIFY) \_\_\_\_\_  
☐ ☐ FALL PROTECTION REQUIRED (SPECIFY) \_\_\_\_\_  
☐ ☐ OTHER (SPECIFY) \_\_\_\_\_

5. ADDITIONAL REQUIREMENTS

YES ☐ NO ☒

- ☐ ☒ NOTIFY BLDG/AREA SUPERVISOR WHEN WORK IS COMPLETE  
☐ ☒ EXPLOSIVES TRANSFERS ALLOWED IN AREA DURING WORK  
☐ ☒ NOTIFY FIRE DEPT / PUBLIC WORKS UTILITIES OF WORK  
☐ ☒ LOCKOUT/TAGOUT HAZARDOUS ENERGY SOURCES (SPECIFY) \_\_\_\_\_  
☒ ☐ RE-INSPECTION OF AREA REQ'D BY SAFETY INSP UPON COMPLETION OF WORK  
☐ ☒ OTHER (SPECIFY) \_\_\_\_\_

6. OTHER:

SUPERVISOR IN IMMEDIATE AREA/DATE

SAFETY DEPARTMENT OFFICIAL/DATE

CONTRACT REPRESENTATIVE/DATE

PUBLIC WORKS REPRESENTATIVE/DATE  
NDW-IHDI/NAVSURFWAR/CEN-5100/3 (Rev. 8-98)

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DO ALL WORK THE SAFE WAY

**Enclosure 15.**  
**Pre-construction Record Meeting Record of 12 November 2002**

N62470-97-D-5000

Ser: 09C1CG

November 2002

*Shaw Environmental Inc.*  
2790 Mosside Blvd  
Monroeville, PA 15146-2792

Subj: CONTRACT N62470-97-D-5000 – REMEDIAL ACTION SITE 41 – SCRAP YARD,  
INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER, INDIAN HEAD,  
MARYLAND

Gentlemen:

Following are the minutes of a pre-construction conference held in the office of the Officer in Charge of Construction (OICC) on 12 November 2002 . Nothing printed in these minutes or discussed at the conference shall change the provisions of this contract. Those present were:

See attached

The completion date is

1. The Contractor's primary contact with the Navy shall be with the Contract Management Team assigned to this project. This team is comprised of the following individuals:

Project Engineer - CATHY B. GARDNER

Quality Assurance Representative – RAY MANGUM

**Enclosure 15.**  
**Pre-construction Record Meeting Record of 12 November 2002**

The OICC organization management consists of the following individuals

OICC-	Chris Kinsey, CDR, CEC, USN
ROICC -	Russell Hime , LT, CEC, USN
Head, Contracts Management -	Felicia Haynie
Head, Construction Management -	Carl Jarvis

The OICC's office telephone number is 301-744-4113, (see attached list for individual extensions.) The fax number is 301-744-4465.

The official mailing address for the OICC is:

OFFICER IN CHARGE OF CONSTRUCTION  
BUILDING 503, INDIAN HEAD DIVISION  
NAVAL SURFACE WARFARE CENTER  
INDIAN HEAD, MARYLAND 20640-5035

2. The Contractor provided the following information:

- a. The Contractor's superintendent (on-site representative) is **Steve Carriere**.  
Telephone number **240-882-1480**.
- b. The Contractor's Quality Control Manager is **Ernie Duke**.  
Telephone number **412-372-7701**.
- c. The Contractor's Project Manager is **Dan Pringle**.  
Telephone number **412-380-6248**.
- d. The Contractor advised he planned to start working
- e. The Contractor advised correspondence is to be addressed to:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

f. The Contractor advised the following subcontractors will be working on the project:

<u>SUBCONTRACTOR</u>	<u>TYPE OF WORK</u>
----------------------	---------------------

**Enclosure 15.**  
**Pre-construction Record Meeting Record of 12 November 2002**

3. The following items were reviewed:

a. Correspondence - All correspondence is to be addressed to the Officer in Charge of Construction, not to individuals.

b. Police and Security -

1) Badges and vehicle passes - shall be obtained from Security. It is the Contractor's responsibility to provide all required information. No one under the age of 18 is permitted on the restricted side of the base.

c. Safety Office and Fire Department -

1) A general Work Permit is required prior to beginning any work on the restricted side of the base.

2) Special Permits are required prior to performing the following activities:

- Hot Work (burning, cutting, welding, etc.)
- Asbestos and Lead abatement

The Construction Representative will arrange for all permits on request, as required.

3) Vehicle Inspection requirements.

4) Explosive area safety and restrictions.

- Cell phones
- Pagers

5) Maintenance of fire lanes.

6) Maintaining fire extinguishers is mandatory.

7) First Aid and Ambulance response.

8) Other issues - .

d. Work Hours - Regular work hours shall be between the hours of 0700 and 1730. Overtime is permitted, if not contrary to specifications, pending prior Government approval. If desired, notify Construction Representative by Thursday preceding Saturday/Sunday work to arrange badging as necessary and scheduling of Government surveillance.

e. Outages - All disruptions of utilities, traffic, parking, access, or use of facilities require written approval from the base authorities. Contractor must contact the Construction Representative in sufficient time to allow for the paper work to be processed. Two weeks advance notice is required.

**Enclosure 15.**  
**Pre-construction Record Meeting Record of 12 November 2002**

4. The following paragraphs/clauses of the contract were discussed:

a. Superintendence - Superintendent must have authority to act for the contractor and be assigned to the job on a full time basis

b. Insurance - Work will not be started until a certificate of liability and workmen's compensation insurance is provided to the OICC. This requirement applies to the prime and all his subcontractors. Note that in the case of cancellation of insurance, the Contracting Officer must be given 30 days notice in writing.

c. Schedule of Prices - Basis for progress payments. Submit to OICC as specified.

d. Progress Chart and Material Delivery Schedule - A CPM or a feasible construction schedule in accordance with the specification is required. Updated chart is required with every invoice. The CPM, when required, will be used to determine justification for all time extensions.

e. Progress Payments - Will be made on a monthly basis when submitted on forms provided for this contract. Review of completion percentages by Government and Contractor is recommended prior to submission of invoice. Amount retained will be explained in letter. Note that retainage of up to 25% of the cost of complex systems may be withheld pending successful performance verification testing and receipt of Operation and Maintenance Manuals. (Complex systems include HVAC, fire protection, and controls systems.)

f. Contractor's Daily Reporting - The Contractor Production Report and the Quality Control Report will be completed daily and delivered to the OICC Quality Assurance Representative as required. Forms shall be completely filled out. Incomplete forms will be returned for correction.

g. Shop Drawings, Submittals and Samples - The Contractor shall maintain an updated submittal register at an accessible location for review by the Government. Material submittals, shop drawings, samples of materials or special drawings required by the specifications shall be submitted to the OICC for approval at the earliest possible date (excepting items to be approved by CQC). This is essential to eliminate delays and to expedite procurement of materials that have a long lead-time. Hand carrying of this material is recommended (may save 5 to 10 days in approval time).

- Shop drawings, brochures, catalog information, certificates of compliance, and samples shall be submitted directly to the OICC for approval.
- Submittals shall have proper identification, i.e., Specification Section Number, Specification Paragraph Number, and Specific Item Description.



**Enclosure 15.**  
**Pre-construction Record Meeting Record of 12 November 2002**

h. As-Built Drawings and Record of Material - Shall be located on site and kept current during life of contract. Submit to OICC as specified *prior* to acceptance of contract. Funds will be withheld pending receipt. Two copies required unless specified otherwise.

i. Oral Modification - No oral modifications will change the contract.

j. Construction Safety - An Accident Prevention Plan (Safety Plan) in accordance with Corps of Engineers Safety and Health Requirements Manual (EM-385-1-1) is required. Refer to EM-385-1-1 for further information on what is required in the Plan. The Internet Web Site for the EM-385-1-1 can be found at:  
<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em385-1-1/toc.htm>

**NOTICE:** *Work will not be permitted to begin until the Accident Prevention Plan is approved.*

Activity Hazard Analysis' (AHA's) are to be prepared for each definable feature of work (DFO), and shall be submitted to the ROICC prior to the DFO preparatory meeting. AHA's are to be site specific -- generic AHA's will be disapproved.

You are required to report all lost time accidents/illnesses to the ROICC as required by the "Accident Prevention" clause (FAR 52.236-13). This office will provide forms for reporting.

k. Environmental Protection Plan - Required before starting work. Full compliance with the environmental part of the specifications is required.

l. Trash Removal and Site Cleanup - Required to be performed DAILY. Remove all waste from the NSWC unless directed otherwise.

m. Labor Standards Compliance - Contractor shall review all payrolls and ensure they are in compliance prior to submission. Progress payments will be returned without payment if payroll violations are observed.

n. Geographic Information System (GIS) - Where required by specification, a GIS survey shall be submitted upon completion of work. The GIS survey data includes underground utility locations, both horizontal and vertical, so data must be gathered during construction. Also note the requirement for a "buried utility location plan" to be approved prior to start of any construction.

5. Other issues discussed include:

a. **PERFORMANCE EVALUATIONS:** An evaluation of the Contractor's performance is completed on each project administered by the OICC. The rating is based on the following general categories:

**Enclosure 15.**  
**Pre-construction Record Meeting Record of 12 November 2002**

Quality Control, Timely Performance, Effectiveness of Management, Compliance with Labor Standards, and Compliance with Safety Standards.

Note that an unsatisfactory overall rating may be issued for a project where only one of the above elements is unsatisfactory. A rating of less than satisfactory can be considered in the award of future projects throughout the Department of Defense.

b. **QUALITY CONTROL PROGRAM:** The specification section entitled Contractor Quality Control will be strictly enforced. The Contractor shall conduct Quality Control Meetings and perform the three phases of inspection as required. Training for Contractor's QC managers is available through the Army Corps of Engineers (Baltimore, MD office can be reached at 410-962-2323). *Note – the Contractor will not be permitted to begin work until the Quality Control Plan is approved.*

c. **FIELD OFFICE OVERHEAD:** In the event that the field office overhead rate was not established under the solicitation process, it will be established during processing of the first modification to the contract/delivery order. The Contractor shall select a method of application for the compensation of field office overhead. Careful consideration should be given to the selection of a method since the selected application will apply for the life of the contract/delivery order.

The Network Analysis System (CPM schedule), where required by contract, will be utilized to determine time extensions. The Contractor will be required to justify all time extensions through CPM schedule analysis.

Sincerely,

CATHY B. GARDNER  
Project Engineer

Enclosure 15.  
Pre-construction Record Meeting Record of 12 November 2002

Preconstruction Mtg for Site 41

Cathy B. Gardner	Roicc, IH	301-744-2181
Al Grant	SHAW E+I	831-277-4241
Joe Walker	SHAW E+I	412-607-0779
Steve Carriere	SHAW E+I	301-743-2120
Shawn Jorgensen	INDIV - NSHC ENVIRO.	301-744-2263
Jeff Morris	EFACHES	202-685-3279
Andy Johnson	SHAW	301-743-2120
Ernie Duke	Shaw	301-743-3530
FRANK JAMES	SAFETY	301-744-1523
Ray Mangum	Roicc	301-744-2180

Enclosure 15.  
Pre-construction Record Meeting Record of 12 November 2002

Get Joe

(CAD/PAD - will be themaly tracked)

You can put your own key.

Temporal fencing to be put on site for security  
Secure bins.

No smoking (Next to 292)

Pete Young - H&R stickers

Dig Permits - Code 09

Need to do a utility search for Dig Permit

Permit for John Stacey <sup>located in 351</sup> - Trailer (8x32)  
IR action

x Phone Line

x Electrical (Beh Mollatto)

\* DRMO - competent person - Joe Motta <sup>Must go to Ft Meade</sup> x 4343

\* ~~Nearest~~ Nearest pull Box (Left side of 436)

Uxo plan - Must check w/ Joe - Gravel + snow (Boxes)

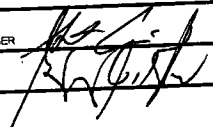
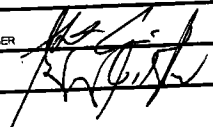
Enclosure 15.  
Pre-construction Record Meeting Record of 12 November 2002

Camera pass

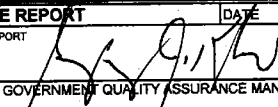
# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE: 11-Nov-02	
(ATTACH ADDITIONAL SHEETS IF NECESSARY)						Project # 831866	
CONTRACT NO. N62470-97-D-5000		TITLE & LOCATION SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND		REPORT NO. 001			
CONTRACTOR SHAW E & I				SITE MANAGER STEVE CARRIERE			
WEATHER/WEATHER EFFECTS				MAX TEMP:		MIN TEMP:	
Cloudy and rain				83		62	
WORK PERFORMED TODAY							
WORK LOCATION AND DESCRIPTION	NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER	
Management and oversight of project.	S. CARRIERE	957826	Site Manager	3	0	SHAW E & I	
Site Eng/ QC	E. DUKE	12898	ENG/QC	4	0	SHAW E & I	
Project accountant.	J. GUZZARDO	957881	PBA	5	0	SHAW E & I	
Health and Safety Officer,	J. WALKER	70583	SSO	0	0	SHAW E & I	
Oversees all field activities for work shift	R. JOHNSON	810728	SUPV	4	0	SHAW E & I	
OFF SITE	G. COKER	957180	OP	0	0	SHAW E & I	
OFF SITE	M. CABBELL	957096	OP	0	0	SHAW E & I	
OFF SITE	S. JACKSON	1268971	RT	0	0	SHAW E & I	
Mobe to site	L. MAHIQUES	956681	RT	0	8	SHAW E & I	
Mobe to site	A. GRANT	792153	SR. UXO	0	8	SHAW E & I	
Mobe to site	B. TINCKNELL	810829	UXO TECH	0	8	SHAW E & I	
Mobe to site	D. ANDERSON	1252041	UXO TECH	0	8	SHAW E & I	
Travel hours						32	
				Total travel hrs to date		32	
JOB SAFETY	JOB SAFETY MEETING HELD THIS DATE?	YES	WORK HOURS ON THIS DATE		16		
	ANY LOST TIME ACCIDENTS THIS DATE?	NO	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT		0		
	TRENCHING/SCAFFOLDING/HV ELECTRICAL/HIGH WORK DONE?	NO	TOTAL WORK HOURS FROM SITE MANAGER		16		
	WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?	NO					
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
SHAW E & I 2- PICK-UP TRUCKS 1-RENTAL CAR 1-PETROGEN SYSTEM							

**Enclosure 16**  
**Shaw E&I Daily Reports**

<b>EQUIPMENT ON SITE</b> <div style="display: flex; justify-content: space-between; font-size: small;"><span>SHAW EQUIPMENT</span><span>HERTZ</span><span>ALBANY GAS</span></div> <div style="font-size: x-small; margin-top: 5px;">1-RENTAL CAR 2-PICKUP 1-PETROGEN SYSTEM</div>	
<b>REMARKS</b> Personnel mobilized to project site. Procurement and site management working on project set up.	
<div style="display: flex; justify-content: space-between;"><div style="font-size: x-small;">CONTRACTORS SITE MANAGER</div><div style="font-size: x-small;">STEVE CARRIERE</div></div> 	<div style="display: flex; justify-content: space-between;"><div></div><div style="font-size: x-small;">DATE</div></div> <div style="text-align: right; font-size: x-small;">11-12-02 11-13-02</div>
<div style="display: flex; justify-content: space-between;"><div style="font-size: x-small;">GOVERNMENT INSPECTOR</div><div></div></div> 	

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL REPORT				Report No.	001			
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date	11-Nov-02			
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT				
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA				
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>					
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>					
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>					
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>					
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>					
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>					
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>					
	INITIAL	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>			<input type="checkbox"/>	NA	BY PERFORMED TEST
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>			<input type="checkbox"/>		
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>					
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>					
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>					
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>					
FOLLOW-UP		WORK COMPLIES WITH CONTRACT AS APPROVED INITIAL PHASE	<input type="checkbox"/>	<input type="checkbox"/>		TESTING PERFORMED & WHO PERFORMED TEST		
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>					
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)					
REMARKS: No site work to begin until after the Precon Meeting scheduled for 11-12-02. Began administrative activities for Site 41. Began accumulating tools and equipment for the work at the site. EOD Specialists mobilized to the site. <small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>								
Ernie Duke - QC Manager				DATE				
GOVERNMENT QUALITY ASSURANCE REPORT				DATE				
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				DATE				
				11-13-02				
GOVERNMENT QUALITY ASSURANCE MANAGER				DATE				



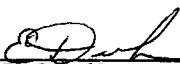
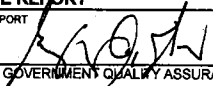
# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE: 12-Nov-02	
(ATTACH ADDITIONAL SHEETS IF NECESSARY) Project # 831866						REPORT NO. 002	
CONTRACT NO. N62478-97-D-5000		TITLE & LOCATION SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND					
CONTRACTOR SHAW E & I				SITE MANAGER STEVE CARRIERE			
WEATHER/WEATHER EFFECTS				MAX TEMP.	MIN TEMP.		
Cloudy and rain				65	51		
WORK PERFORMED TODAY							
WORK LOCATION AND DESCRIPTION	NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER	
Management and oversight of project.	S. CARRIERE	957826	Site Manager	5	0	SHAW E & I	
Site Eng/ QC	E. DUKE	12898	ENG/QC	5	0	SHAW E & I	
Project accountant.	J. GUZZARDO	957881	PBA	5	0	SHAW E & I	
Health and Safety Officer,	J. WALKER	70583	SSO	8	0	SHAW E & I	
Oversees all field activities for work shift	R. JOHNSON	810728	SUPV	5	0	SHAW E & I	
OFF SITE	G. COKER	957180	OP	1	0	SHAW E & I	
OFF SITE	M. CAMPBELL	957096	OP	1	0	SHAW E & I	
OFF SITE	S. JACKSON	1268971	RT	2	5	SHAW E & I	
Mobe to site	L. MAHIQUES	956681	RT	2	0	SHAW E & I	
Mobe to site	A. GRANT	792153	SR. UXO	7	0	SHAW E & I	
Mobe to site	B. TINCKNELL	810829	UXO TECH	7	0	SHAW E & I	
Mobe to site	D. ANDERSON	1252041	UXO TECH	7	0	SHAW E & I	
Travel hours					5		
				Total travel hrs to date		37	
JOB SAFETY		JOB SAFETY MEETING HELD THIS DATE?		YES	WORK HOURS ON THIS DATE		55
		ANY LOST TIME ACCIDENTS THIS DATE?		NO	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT		18
		TRENCHING/SCAFFOLDING/VE ELECTRICAL/HIGH WORK DONE?		NO	TOTAL WORK HOURS FROM SITE MANAGER		73
		WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?		NO			
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in effect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
ALCAN CAT	UNITED RENT	SUNBELT	ALLIED				
1-950 LOADER	1-20KW GENERATOR	1-AIR COMPRESSOR	1-20 CONEX				


**Enclosure 16**  
**Shaw E&I Daily Reports**

<b>EQUIPMENT ON SITE</b>		
<b>SHAW EQUIPMENT</b>	<b>ALLIED</b>	<b>UNITED RENT</b>
1-RENTAL CAR	1-20' CONEX	1-20KW GENERATOR
2-PICKUP		
1-PETROGEN SYSTEM	<b>ALBANY CAT</b>	<b>SUNBELT</b>
	1-950 LOADER	1-AIR COMPRESSOR
<b>REMARKS</b>  One additional person mobilized to project site.  Held site orientation for crew at scrapyard. Had everyone sign off on safety plan.  Watched video on PETROGEN Cutting torch for safety and performance.  Had UXO personnel walk site to get familiar with UXO items.  Attended precon meeting at 1000 hrs and also at 1300hrs to discuss disposal of demil scrap.		
CONTRACTORS SITE MANAGER	STEVE CARRIERE 11-13-02	
GOVERNMENT INSPECTOR	DATE 11-14-02	

**Enclosure 16**  
**Shaw E&I Daily Reports**

<b>CONTRACTOR QUALITY CONTROL REPORT</b>				Report No. 002		
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date 12-Nov-02		
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT		
<b>PREPARATORY</b>	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	Demilitarizing, Checklist attached		
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>			
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>			
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>			
	WORK METHOD AND SCHEDULE DISCUSSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
	<b>INITIAL</b>	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>		<input type="checkbox"/>	<div style="display: flex; justify-content: space-between;"> <div>NA</div> <div>by PERFORMED TEST</div> </div>
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>		<input type="checkbox"/>	
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>			
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>			
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>			
<b>FOLLOW-UP</b>		WORK COMPLIES WITH CONTRACT AS APPROVED INITIAL PHASE	<input type="checkbox"/>	<input type="checkbox"/>	<div style="display: flex; justify-content: space-between;"> <div></div> <div>TESTING PERFORMED &amp; WHO PERFORMED TEST</div> </div>	
		WORK COMPLIES WITH SAFETY REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>		
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)		REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)				
<b>REMARKS:</b> Preconstruction Meeting conducted at the ROICC office. Met at the site with Joe Minter, Manager of the Recycling Center and Ray Magnum, ROICC after the meeting to discuss the work and site setup. Steady rain all day.						
<small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>						
 Ernie Duke - QC Manager				11-13-02 DATE		
<b>GOVERNMENT QUALITY ASSURANCE REPORT</b>						
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				DATE		
 GOVERNMENT QUALITY ASSURANCE MANAGER				11-14-02 DATE		

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL PREPARATORY PHASE CHECKLIST				DATE	11/12/2002
Contract No. N624790-97-D-5000				Index No.	002-P01
PHASE	(BLANK NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT	
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	<b>Demilitarization</b>	
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>	<b>Attendees:</b>	
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>	Site Crew	
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	Randy Johnson, Shaw	
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>	Joe Walker, Shaw	
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	Steve Carrier, Shaw	
	WORK METHOD AND SCHEDULE DISCUSSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Al Grant, Shaw EOD Supr.	
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EOD Crew	
				<b>Plans and Specifications:</b>	
				No Plans or Specs, only a scope of work	
				<b>Submittals</b>	
				Pre-construction Submittals approved	
			TD-001 Technical Directive for Demilitarizing the site approved		
			<b>Materials</b>		
			None		
			<b>Preliminary Work</b>		
			Hot Work Permit needed prior to starting		
			<b>Testing Plan</b>		
			None		
			<b>Work Method and Schedule</b>		
			OE items to be inspected by UXO Specialist to determine if safe to cut up		
			Items will be identified and placed on the concrete pad where they will be cut		
			Size of items and number of cuts to be determined after talking to Base scrap dealer		
			Several methods will be used to cut the items depending on thickness and makeup		
			Debris will be segregated out and placed into a rolloff for disposal		
			Soil to be screened to pick out CADs and PADs, which are small activating devices		
			<b>Activity Hazard Analysis</b>		
			UXO Specialist discussed dangers of working with OE items		
			Stressed not touching any items until they are inspected and identified as inert		
			Watched a video on the gasoline cutting torch safety features and handling		
			 11-13-02		

**Enclosure 16**  
**Shaw E&I Daily Reports**



**FIELD ACTIVITY  
DAILY LOG**

DAILY LOG	DATE	11	12	02
	NO.	0	0	1
	SHEET	1 OF 1		

PROJECT NAME:	SITE 41 INDIAN HEAD MD			PROJECT NO.:	831866
FIELD ACTIVITY SUBJECT:	SCRAP YARD	UXO	69909230		
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:					
<p>0700 Meeting at the Main office</p> <p>0710 Badge issue and vehicle registration.</p> <p>0730 Tailgate Safety and initial briefing</p> <p>0900 Site visit</p> <p>1000 Meeting with the ROIC of Construction</p> <p>1200 Lunch</p> <p>1300 Meeting with DRMO VOE MINTER</p> <p>1400 Secured operations for the Day</p> <p align="center"><i>AL GRAM</i></p>					
VISITORS ON SITE:			CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:		
N/A			N/A		
WEATHER CONDITIONS:			IMPORTANT TELEPHONE CALLS:		
Cool RAIN			301-743-2120 OFFICE 301-743-3550 TRAILER		
IT PERSONNEL ON SITE: <i>SEL ANDERSON, BRUCE TINKNER, AL GRAM</i>					
SIGNATURE: <i>AL GRAM</i>			DATE: 11/12/02		

TASK Argon Gas Cutting Operation (30 min. movie) Side 41

HEALTH & SAFETY OFFICER: Joe W. Walker SUPT: St. C.

**Enclosure 16**  
**Shaw E&I Daily Reports**

# PETROGEN'S OXY-GASOLINE SAFETY TORCH CUTS THROUGH THE SAFETY BARRIER

## SAFETY

**P**ETROGEN is the safest cutting torch ever built! PETROGEN's design eliminates every major danger present in conventional cutting fuels.

### Safety In The Fuel

Gasoline is the safest cutting fuel. It is a totally stable, non-toxic liquid. As a confined liquid it cannot burn. Long its vapors can burn. In the PETROGEN SYSTEM gasoline is always contained in liquid form as it is in an automobile. It cannot backflash up the fuel line because the fuel is delivered in a liquid form and cannot catch up. Any flame front trying to catch up is blocked by a wall of liquid gasoline. The PETROGEN SYSTEM is so safe that a backflash test is not required.



### Safety In The Tank

ASME Tank: The gasoline tank is completely protected against all risks of explosion, fire and hose rupture. Each tank is individually certified that it fulfills ASME quality standards.

Standard features include pressure gauge, air pump, filler cap with a pressure relief valve, and a fast flow check valve that immediately shuts off the fuel if the hose is damaged.

### Safety In The Tips

PETROGEN tips run remarkably cool. They can be handled immediately upon removal from the work area. PETROGEN tips are never dangerously fouled by slag splatter. Tips do not explode and seldom burn out. They can even work inside a flaming environment.

### Safety In Handling

The PETROGEN SYSTEM is truly portable. A 2.5 gallon PETROGEN tank filled with gasoline weighs only 30 lbs. compared with a full large acetylene tank (no. 5) which weighs 200 lbs.

The tank can be filled at any gasoline pump in seconds. No special facilities or handling is needed. The PETROGEN system can be filled by anyone, anywhere.

### Safety In Petrogen

Unique to the PETROGEN SAFETY TORCH SYSTEM is the automatic fuel shutoff valve. If a tractor accidentally cuts a PETROGEN hose, the tank senses a fuel surge and immediately activates a check valve that stops the fuel flow. FAST. No other cutting system can deliver this protection against everyday hazards.



This is the safest fuel delivery system available. Here is what the San Francisco Port Authority Fire Marshall says about PETROGEN: "The backfiring, popping, spark scattering fire hazard so prevalent in typical conventional cutting was absent. Also the positive function of your quick action built-in automatic gasoline shutoff valve in the supply tank in the event of line rupture was most impressive."

### Safety Verified

The PETROGEN SYSTEM is listed by Underwriters Laboratories in the U.S.A. and Canada.

The PETROGEN SYSTEM satisfies OSHA requirements.

Marine authorities have tested the entire system and approved it for use on board ship.

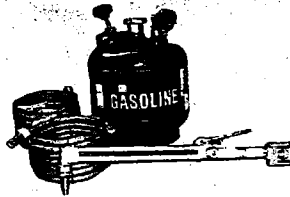
In a test to attempt destruction the U.S. Navy placed a full PETROGEN tank in a heavily burning enclosure. The check valve shut off the liquid flow and the filler cap automatically released the vapors. When the fire was extinguished the tank was completely intact and liquid gasoline was still inside.

PETROGEN'S safety features have been extensively tested and accepted by leading underwriters, industrial inspection and safety boards around the world.

UNDERWRITERS LABORATORIES U.S.A. UNDERWRITERS LABORATORIES CANADA MASSACHUSETTS INSTITUTE OF TECHNOLOGY UNDERWRITERS OF SHIPBOARD SAFETY BOARD OF NEW YORK CITY U.S. DEPT. OF COMMERCE U.S. MARINE SAFETY BOARD

**Enclosure 16**  
**Shaw E&I Daily Reports**

The **PETROGEN** OXY-GASOLINE SAFETY TORCH



IS THE **SAFEST** OXY-FUEL TORCH IN THE WORLD.

WHY?

**BECAUSE WITH PETROGEN . . .**

**IT'S IMPOSSIBLE TO BACKFLASH THE TORCH UP THE FUEL LINE!**

Liquid gasoline does not burn. Only the vapors burn. With the gasoline liquid through the torch and into the cutting tip, a backflash up the fuel line is impossible. The gasoline is its own backflash arrestor.

**FUEL LEAKS ARE VISIBLE.**

Even the smallest fuel leak can be seen, felt and smelled. The leak is immediately located and fixed. Other cutting gases such as acetylene and propane often go undetected until a spark is introduced.

**FUEL SHUTS OFF IF HOSE IS CUT.**

The fuel tank contains a fast flow check valve in the fuel outlet. If the fuel hose is accidentally ruptured, the resulting surge of gasoline forces a brass ball upward into a seat which shuts off the gasoline. Spillage is about 2 tablespoons.

**LESS LIKELIHOOD OF THE SPARKS CAUSING A FIRE.**

The oxy-gasoline flame is 100% oxidizing of the steel it burns. Sparks are light weight with little heat. The risk of burn to the operator is almost eliminated.

**TANK CANNOT EXPLODE IF DROPPED OR CAUGHT IN A FIRE.**

An acetylene tank can explode if dropped or heated, or if a backflash reaches it. Acetylene is unstable and can explode instantaneously, without oxygen. The PETROGEN tank will not create a hazard if dropped or exposed to heat. Gasoline is a totally stable compound that cannot explode. Only in vapor form will gasoline burn, and then only in the narrow range of 1.8-6% in air.

**OPERATOR CAN EASILY HANDLE THE 30 POUND PETROGEN TANK COMPARED TO A COMPARABLE 200 POUND ACETYLENE TANK**

The PETROGEN 2-1/2 gallon tank contains the same energy as a large acetylene cylinder of 250 cubic feet. The weight comparison is 30 pounds against over 200 pounds. The hazard of moving the 30 pound gasoline tank is much less than the risk in moving the heavy acetylene cylinder.

**TIPS AND TORCH HEAD RUN MUCH COOLER**

When the gasoline vaporizes inside the cutting tip, the tip becomes a refrigerator and runs cool. The entire head is cooled by the evaporation of the fuel. The torch and the operator are both under reduced risk of being damaged.

**PETROGEN IS SAFETY APPROVED EVERYWHERE**

The safety of the PETROGEN system has been recognized and documented by the U.S. Department of Energy, Underwriters Laboratories, the U.S. Navy, the U.S. Coast Guard, Lloyd's Register of Shipping, and the German Government's GS certificate.

See our website for more information: [www.petrogen.com](http://www.petrogen.com)  
Or e-mail us at: [petrogen@petrogen.com](mailto:petrogen@petrogen.com)



## Enclosure 16

### Shaw E&I Daily Reports

**PETROGEN**  
Oxy-Gasoline Cutting Torch

CALL US IF YOU NEED ASSISTANCE

If you have questions, we want to hear from you!

Telephone: 510-569-7877

Toll Free: 877-88-TORCH (877-888-6724)

Fax: 510-569-8070

#### IMPORTANT INFORMATION

**\* FILL THE PETROGEN TANK WITH FRESH GASOLINE FROM A GASOLINE STATION. \***

Fuel from other storage tanks is often old and/or contaminated and can make the Petrogen flame run yellow.

**IF THE PREHEAT FLAME BURNS YELLOW:**

1. Tip may be too cool. Warm the tip by pressing it to the steel.
2. Flame may be too rich in gasoline. Increase oxygen or decrease gasoline.
3. Flame may be too large. Reduce deep blue core of flame to 3/16 inch (4-5 mm).
4. A new gasoline hose contains an oily residue from the manufacturing process which causes the flame to burn yellow. It will disappear in about 10 minutes for each 20 feet of hose.
5. Gasoline may be contaminated with oil. Get new fresh gas.
6. Oxygen supply may be insufficient.

**IF THE FLAME GOES OUT WHILE CUTTING:**

It might still be burning inside the tip. Stop the burning by quickly shutting off the preheat oxygen, and then just as quickly opening it up again. Re-light the torch. There is no danger, but you might ruin the tip if you don't act quickly.

**IF THE TIP NUT GETS LOOSE:**

If the torch head gets hot, the tip nut sometimes becomes loose. Although expansion of gasoline inside the cutting tip makes the tip run cool, exposing the torch head to a very hot environment can overcome the cooling effect and the head can get hot. This heat can expand the brass in the torch head so that the threads pull away from the threads on the tipnut. The tip nut may loosen and the torch will pop and leak. **Do not tighten the tip nut while the torch head is hot.** The brass is hot and the tightening might distort the head. Cool the head first. The head can be cooled rapidly by closing both valves, then opening only the gasoline valve. The hot tip will vaporize the gasoline instantly and cool the tip. When the vapor turns to a mist the head is cool and the tip nut can be tightened. **(To keep the torch cool, take advantage of Petrogen's long "coupling distance," described below.)**

**YOU CAN LIFT THE TIP HIGH ABOVE THE STEEL AND STILL KEEP CUTTING:**

You can back away from emerging slag and heat concentrations because of the gasoline flame's long coupling distance. The Petrogen torch does not need to be precisely 1/4" away from the steel to continue cutting, as other torches do. Keep the tip out of the hot spots and you will increase tip life and prevent overheating of the torch head.

**YOU CAN BURY THE TIP IN MUD, SAND, WATER, ETC.:**

The flame might go out but will never backflash. The flame is very forceful because the gasoline in the tip expands 160 times when it changes from liquid to vapor.


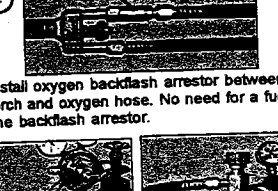


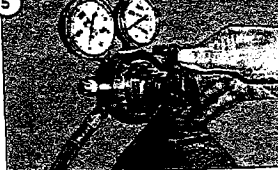
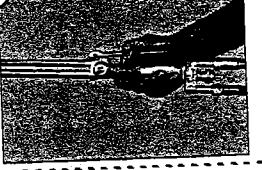
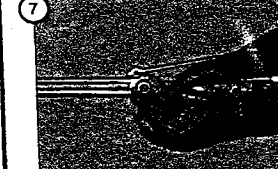
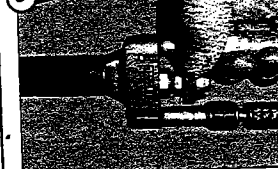
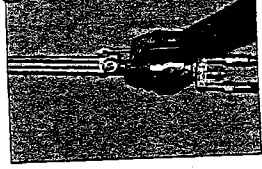
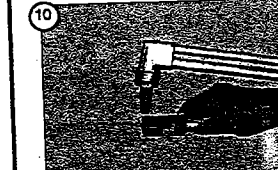

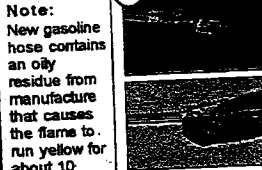
**YOU ARE SAFE:**

1. The Petrogen torch cannot backflash up the gasoline line. Liquid gasoline does not burn.
2. Any leak would leave a wet spot, would be visible and could be fixed quickly.
3. If the gasoline hose is cut, the fast flow check valve in the tank shuts off the fuel.

# Enclosure 16

## Shaw E&I Daily Reports

### GETTING STARTED . . .

		
<p>1 Fill tank only at a gasoline station. Gasoline must be fresh (not over 4 months old) and not contaminated with oil or diesel fuel. Low-octane fuel works fine.</p>	<p>2 Install oxygen backflash arrestor between torch and oxygen hose. No need for a fuel line backflash arrestor.</p>	<p>3 Pump tank to 20 psi. Pressure drops as torch cuts. When it drops to 10 psi, pump back to 20 psi. <u>Fast flow safety valve needs 10 psi to function.</u></p>
		
<p>4 Open tank gasoline valve slowly, about 2 turns. After 30 seconds, open valve fully. If gasoline is shut off by fast flow valve, close valve, tap tank on the ground and repeat.</p>	<p>5 Select cutting tip and oxygen pressure from cutting chart on gasoline tank. Open oxygen bottle valve slowly and fully. Set desired pressure on oxygen regulator.</p>	<p>6 Purge oxygen line by depressing cutting lever for 5 seconds. Failure to do this may create conditions for oxygen backflash.</p>
		
<p>7 Open torch oxygen valve about 3/4 turn. Final opening depends on tip size and oxygen pressure.</p>	<p>8 Open torch gasoline valve until light mist appears. If liquid drips from torch, increase oxygen or reduce gasoline.</p>	<p>9 Purge oxygen line again by depressing cutting lever for 5 seconds.</p>
		
<p>10 Ignite torch by striking spark close to the tip and to one side. A new hose contains air which extinguishes the flame. Just light again - about 2 or 3 times until the hose is purged of air.</p>	<p>11 Warm tip by pressing it to steel. Adjust flame until orange rays are 2-3 inches long (5-7 cm).</p>	<p>12 Final adjusted flame should have an inner blue core about 3/16-inch long (4-5 mm).</p>
<p><b>Important Note:</b> New gasoline hose contains an oily residue from manufacture that causes the flame to run yellow for about 10 minutes. Longer hoses take longer for this residue to clear.</p>	<p>When finished cutting, shut down torch by closing gasoline first, then oxygen.</p>	

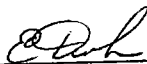
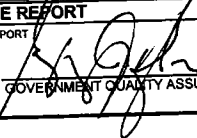
# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE: 13-Nov-02	
(ATTACH ADDITIONAL SHEETS IF NECESSARY)						Project # 831866	
CONTRACT NO. N62478-97-D-5886		TITLE & LOCATION SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND		REPORT NO. 003			
CONTRACTOR SHAW E & I				SITE MANAGER STEVE CARRIERE			
WEATHER/ WEATHER EFFECTS Partly cloudy				MAX TEMP: 65		MIN TEMP: 41	
WORK PERFORMED TODAY							
WORK LOCATION AND DESCRIPTION	NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER	
Management and oversight of project.	S. CARRIERE	957826	Site Manager	5	0	SHAW E & I	
Site Eng/ QC	E. DUKE	12898	ENG/QC	5	0	SHAW E & I	
Project accountant.	J. GUZZARDO	957881	PBA	5	0	SHAW E & I	
Health and Safety Officer,	J. WALKER	70583	SSO	10	0	SHAW E & I	
Oversees all field activities for work shift	R. JOHNSON	810728	SUPV	6	0	SHAW E & I	
On excavator handling UXO for crew	G. COKER	957180	OP	10	0	SHAW E & I	
OFF SITE	M. CABELL	957096	OP	0	0	SHAW E & I	
Going through site with UXO personnel, demol OE scrap	S. JACKSON	1268971	RT	10	0	SHAW E & I	
Going through site with UXO personnel, demol OE scrap	L. MAHIQUES	956681	RT	10	5	SHAW E & I	
Identifying UXO items, and demol OE scrap	A. GRANT	792153	SR UXO	10	0	SHAW E & I	
Identifying UXO items, and demol OE scrap	B. TINCKNELL	810829	UXO TECH	10	0	SHAW E & I	
Identifying UXO items, and demol OE scrap	D. ANDERSON	1252041	UXO TECH	10	0	SHAW E & I	
Travel hours				Total travel hrs to date		42	
JOB SAFETY		JOB SAFETY MEETING HELD THIS DATE?		YES		WORK HOURS ON THIS DATE	
		ANY LOST TIME ACCIDENTS THIS DATE?		NO		CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT	
		TRENCHING/SCAFFOLDING/HV ELECTRICAL/HIGH WORK DONE?		NO		73	
		WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?		NO		TOTAL WORK HOURS FROM SITE MANAGER	
						164	
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
CARTER CAT		E & R WELDERS		HERTZ		GEBHICKLUND	
2-320 EXCAVATORS		1-PLASMA CUTTER		1-SKIDSTER		1-30CY DUMPSTER	
		3-BOTTLES OXYGEN					

# **Enclosure 16** **Shaw E&I Daily Reports**

EQUIPMENT ON SITE				
<b>SHAW EQUIPMENT</b>	<b>CATERPILLAR</b>	<b>UNITED RENT</b>	<b>R &amp; R RENTERS</b>	<b>HERTZ</b>
1-RENTAL CAR	2-520 EXCAVATORS	1-20KW GENERATOR	1-PLASMA CUTTER	1-SKIDSTER
2-PICKUP			3-BOTTLES OXYGEN	
1-PETROGEN SYSTEM	<b>ALCAN CAT</b>	<b>SUNBELT</b>	<b>QUESTHOUND</b>	<b>ALLIED</b>
	1-550 LOADER	1-AIR COMPRESSOR	1-30CY DUMPSTER	1-20 CONEX
<b>REMARKS</b> <p>After safety meeting had all personnel go down to site so UXO personnel could give all essential personnel site orientation.</p> <p>UXO items were mark inert and staged for demil process.</p> <p>Crew started demil process in afternoon with petrogen torch. Awaiting plasma cutter to assist in demil process.</p> <p>Directions from DRMO and OE scrap dealer gave instructions to SR. UXO super on how OE scrap would be excepted after demil operation.</p> <p>Two possible bidders on site to look at heavy iron for disposal, SHAW awaiting bids to report back to Navy.</p>				
CONTRACTORS SITE MANAGER		STEVE CARRIERE 11.14.02		
GOVERNMENT INSPECTOR		DATE 11.15.02		

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL REPORT				Report No.	003		
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date	13-Nov-02		
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT			
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	Site Setup Checklist attached			
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>				
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>				
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>				
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>				
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>				
	WORK METHOD AND SCHEDULE DISCUSSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
	PRELIMINARY WORK WAS DONE CORRECTLY	<input checked="" type="checkbox"/>	<input type="checkbox"/>			Demilitarization Site Setup Checklist attached Checklist attached	PERFORMED TEST
	SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>	<input type="checkbox"/>				
WORKMANSHIP IS SATISFACTORY	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
TEST RESULTS ARE ACCEPTABLE	<input type="checkbox"/>	<input type="checkbox"/>					
WORK IS IN COMPLIANCE WITH THE CONTRACT	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
FOLLOW-UP	WORK COMPLIES WITH CONTRACT AS APPROVED	<input type="checkbox"/>	<input type="checkbox"/>		TESTING PERFORMED & WHO PERFORMED TEST		
	INITIAL PHASE	<input type="checkbox"/>	<input type="checkbox"/>				
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>				
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input type="checkbox"/>	<input type="checkbox"/>				
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)				REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)			
REMARKS: Base scrap dealer on site and explained to Al Grant UXO Specialist the size requirement for the scrap							
<small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>				 Ernie Duke - QC Manager			
				11-14-02 DATE			
GOVERNMENT QUALITY ASSURANCE REPORT				DATE			
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				 GOVERNMENT QUALITY ASSURANCE MANAGER			
				11-15-02 DATE			

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL PREPARATORY PHASE CHECKLIST				DATE
Contract No. N824790-97-D-5000				11/13/2002
				Index No. 002-P02
PHASE	(BLANK NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Site Setup</b> <b>Activity Number 01115</b>
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>	<b>Attendees:</b> Site Crew Randy Johnson, Shaw Joe Walker, Shaw Steve Carrier, Shaw Al Grant, Shaw EOD Supr. EOD Crew
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>	
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>	
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>	
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	<b>Plans and Specifications:</b> Sections 01115 Drawing C-2
	WORK METHOD AND SCHEDULE DISCUSSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Submittals</b> Pre-construction Submittals approved TD-001 Technical Directive for Demilitarizing the site approved
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Materials</b> None
				<b>Preliminary Work</b> Prior to digging outside the concrete containment utilities will be located
				<b>Testing Plan</b> None
				<b>Work Method and Schedule</b> Only the trailer and the storage box to be set up at this time Trailer will need to be setup outside the area which will or may be excavated Construction entrance and other site features to be constructed prior to excavation work Shaw to take control of the site and put their own key on the gate
				<b>Activity Hazard Analysis</b> Site Safety Officer reviewed the job hazards with the site personnel

*ADW* 11-14-02

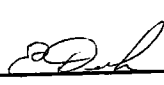
**Enclosure 16**  
**Shaw E&I Daily Reports**

<b>CONTRACTOR QUALITY CONTROL INITIAL INSPECTION CHECKLIST</b> Contract No. N624790-97-D-5000				DATE 13-Nov-02					
				Index No. 003-101					
				Activity No.					
PHASE	(BLANK NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT					
PRELIMINARY WORK WAS DONE CORRECTLY		<input type="checkbox"/>	<input type="checkbox"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; padding: 5px;">TESTING PERFORMED &amp; WHO</th> <th style="width: 50%; padding: 5px;">PERFORMED TEST</th> </tr> <tr> <td colspan="2" style="height: 100px;"></td> </tr> </table>		TESTING PERFORMED & WHO	PERFORMED TEST		
TESTING PERFORMED & WHO	PERFORMED TEST								
SAMPLE HAS BEEN PREPARED/APPROVED		<input type="checkbox"/>	<input type="checkbox"/>						
WORKMANSHIP IS SATISFACTORY		<input checked="" type="checkbox"/>	<input type="checkbox"/>						
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>						
WORK IS IN COMPLIANCE WITH THE CONTRACT.		<input checked="" type="checkbox"/>	<input type="checkbox"/>						
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input checked="" type="checkbox"/>	<input type="checkbox"/>						
<b>Demilitarization</b> All Grant met with the scrap dealer for the Base to determine what size the scrap had to be cut up to The three UXO Specialists inspected items and identified which could be cut up safely These were marked clearly for the other staff to begin cutting Safety equipment in-place prior to starting torch Hot Work Permit issued and in-hand prior to starting the cutting operation									

INITIAL

*ED* 11-14-02

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL INITIAL INSPECTION CHECKLIST				DATE	13-Nov-02
Contract No. I9824790-97-D-5000				Index No.	003-002
				Activity No.	1115
PHASE	(BLANK NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT	
INITIAL	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>	<div>TESTING PERFORMED &amp; WHO PERFORMED TEST</div>	
	SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>	<input type="checkbox"/>		
	WORKMANSHIP IS SATISFACTORY	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	TEST RESULTS ARE ACCEPTABLE	<input type="checkbox"/>	<input type="checkbox"/>		
	WORK IS IN COMPLIANCE WITH THE CONTRACT	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	<b>Site Setup</b> Determined location of work areas and work zones Received Work Permit prior to the start of work Mobilized several pieces of equipment and inspected each for operation and safety Discussed location of site office with Ray Magnum, ROICC No excavation work to be done outside containment area until utilities are marked Dual containment fuel tank set up				
			 11-14-02		



**Enclosure 16**  
**Shaw E&I Daily Reports**



**FIELD ACTIVITY  
DAILY LOG**

DAILY LOG	DATE	11	13	02
	NO.	0	0	2
	SHEET	1	OF	1

PROJECT NAME: <u>SITE 41 INDIAN HEAD MD</u>		PROJECT NO.: <u>831866</u>
FIELD ACTIVITY SUBJECT: <u>SCRAP YARD</u> <u>VX0</u>		<u>69909230</u>
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:		
0700	BADGES	
0715	TAIL GATE	
0808	STARTED TO SEGREGATE AND INSPECT THE DRUMMAGE I MARKED THE ONES READY FOR CUTTING.	
1200	Lunch	
1300	Back to work	
1400	TORCHES ON SITE	
1500	Cut some items	
	1 Bull Pup Wagonhead	
	2 Rocket Antenna Motors	
	Some problems with the Torch.	
1650	Shut down the Torch (30 minute wait period)	
1730	Second operations for the day.	
Nothing Follows		
VISITORS ON SITE:		CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
N/A		N/A
WEATHER CONDITIONS:		IMPORTANT TELEPHONE CALLS:
Cold		N/A
IT PERSONNEL ON SITE: <u>Paul Anderson, Bruce Tucker, A. G. Anderson</u>		
SIGNATURE: <u>[Signature]</u>		DATE: <u>11/13/02</u>

TASK Site Preparation Site 41

Size 41

Joe Walker

AC

[illegible]

**Enclosure 16**  
**Shaw E&I Daily Reports**

**Attachment B  
Activity Hazard Analyses**

<b>ACTIVITY HAZARD ANALYSIS FOR SITE PREPARATION</b>				
<b>Task Breakdown</b>	<b>Potential Hazards</b>	<b>Critical Safety Practices</b>	<b>Personal Protective Clothing and Equipment</b>	<b>Monitoring Devices</b>
Equipment/ Facility Setup	Slips, Trips, Falls	<ul style="list-style-type: none"> <li>• Clear walkways work areas of equipment, tools, vegetation, and debris</li> <li>• Exit equipment slowly and maintain three point contact</li> <li>• Mark, identify, or barricade other obstructions</li> </ul>		
	Spills	<ul style="list-style-type: none"> <li>• Clean up spills before initiating maintenance</li> <li>• Review maintenance procedures for safety practices</li> </ul>		
	Struck By/Against Heavy Equipment	<ul style="list-style-type: none"> <li>• Wear reflective warning vests when exposed to vehicular traffic</li> <li>• Isolate equipment swing areas</li> <li>• Make eye contact with operators before approaching equipment</li> <li>• Understand and review hand signals</li> <li>• Follow hand signals of ground workers for equipment manipulation when placing/loading equipment into bucket</li> <li>• Step away from equipment when bucket adjustments are made</li> <li>• Do not attempt verbal communication in high noise backgrounds</li> </ul>	Warning vests, hard hat, safety glasses, steel toe work boots	
	Pinch Points	<ul style="list-style-type: none"> <li>• Review equipment adjustment procedures, identify pinch points</li> <li>• Isolate/block pinch points to limit motion when inserting pins, fasteners, closing tackles</li> </ul>	Leather gloves	
	Equipment failure	<ul style="list-style-type: none"> <li>• Perform daily maintenance inspections on operating equipment</li> </ul>		

**Attachment B  
Activity Hazard Analyses**

**ACTIVITY HAZARD ANALYSIS FOR SITE PREPARATION**

Task Breakdown	Potential Hazards	Critical Safety Practices	Personal Protective Clothing and Equipment	Monitoring Devices
Equipment/ Facility Setup (Cont.)	Electrical Shock	<ul style="list-style-type: none"> <li>De-energize or shut off utility lines at their source before work begins</li> <li>Use double insulated or properly grounded electric power-operated tools</li> <li>Maintain tools in a safe condition</li> <li>Provide an equipment-grounding conductor program or employ ground-fault circuit interrupters</li> <li>Use qualified electricians to hook up electrical circuits</li> <li>Inspect all extension cords daily for structural integrity, ground continuity, and damaged insulation</li> <li>Cover or elevate electric wire or flexible cord passing through work areas to protect from damage</li> <li>Keep all plugs and receptacles out of water</li> <li>Use approved water-proof, weather-proof type if exposure to moisture is likely</li> <li>Inspect all electrical power circuits prior to commencing work</li> <li>Follow Health and Safety SH315, Control of Hazardous Energy and the Site-Specific Lockout/Tagout/Try Plan</li> </ul>	Lockout/Tagout Devices	Voltage meter or 'Tic' tracer
	Handling Heavy Objects	<ul style="list-style-type: none"> <li>Observe proper lifting techniques</li> <li>Obey sensible lifting limits (60 lb. Maximum per person manual lifting)</li> <li>Use mechanical lifting equipment (hand carts, trucks) to move large, awkward loads</li> <li>Avoid carrying heavy objects above shoulder level</li> <li>Avoid manual lifting/carrying tasks</li> </ul>		

**Attachment B  
Activity Hazard Analyses**

<b>ACTIVITY HAZARD ANALYSIS FOR SITE PREPARATION</b>				
<b>Task Breakdown</b>	<b>Potential Hazards</b>	<b>Critical Safety Practices</b>	<b>Personal Protective Clothing and Equipment</b>	<b>Monitoring Devices</b>
Equipment/ Facility Setup (Cont.)	Sharp Objects	<ul style="list-style-type: none"> <li>Wear cut resistant work gloves when the possibility of lacerations or other injury may be caused by sharp edges or objects</li> <li>Maintain all hand and power tools in a safe condition</li> </ul>	Leather gloves	
	Ladders	<ul style="list-style-type: none"> <li>Inspect ladders before use for mud buildup on treads</li> <li>Clean mud from boots before climbing on ladders</li> <li>Follow the three point of contact rule</li> </ul>		
	High Noise Levels	<ul style="list-style-type: none"> <li>Use hearing protection when exposed to excessive noise levels (greater than 85 dBA over an 8-hour work period)</li> </ul>	Ear plugs	
	Burns Associated with Loading/Unloading Equipment on Trucks	<ul style="list-style-type: none"> <li>Identify heavy objects for loading that may have hot surfaces</li> <li>Allow objects to cool or cover hot surfaces with non-combustible material to protect workers from burns</li> </ul>		
	Walking on Machine Tracks	<ul style="list-style-type: none"> <li>Avoid walking on machine tracks whenever possible; clean tracks for safe walking/working surfaces</li> <li>Observe track surfaces when walking, move cautiously on uneven, slippery surfaces</li> <li>Avoid sudden awkward motions (pulling/erking fuel hoses)</li> </ul>		
	High/Low Ambient Temperature	<ul style="list-style-type: none"> <li>Provide fluids to prevent worker dehydration</li> <li>Monitor for Heat/Cold Stress in accordance with Health and Safety Procedures HS400 &amp; HS401</li> </ul>	Insulated clothing (subject to ambient temperature)	Meteorological Equipment
<b>Equipment Required</b>		<b>Inspection Requirements</b>	<b>Training Requirements</b>	
<ul style="list-style-type: none"> <li>Forklifts/hand carts</li> <li>Ladders</li> <li>Hand Tools</li> </ul>		<ul style="list-style-type: none"> <li>Daily equipment inspections as per manufacturers' requirements</li> <li>Inspection of all emergency equipment (i.e., first aid kits, fire extinguishers)</li> </ul>	<ul style="list-style-type: none"> <li>Review AHA with all task personnel</li> <li>Review SSHASP</li> <li>Review operations/safety manuals for all equipment utilized</li> </ul>	

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE:	14-Nov-02
(ATTACH ADDITIONAL SHEETS IF NECESSARY)						Project #	831866
CONTRACT NO.		TITLE & LOCATION		REPORT NO.		004	
N63478-97-D-5000		SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND					
CONTRACTOR				SITE MANAGER			
SHAW E & I				STEVE CARRIERE			
WEATHER/WEATHER EFFECTS				MAX TEMP:	MIN TEMP:		
Partly sunny				68	41		
WORK PERFORMED TODAY							
WORK LOCATION AND DESCRIPTION	NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER	
Management and oversight of project	S. CARRIERE	957826	Site Manager	5	0	SHAW E & I	
Site Eng/ QC	E. DUKE	12898	ENG/QC	5	0	SHAW E & I	
Project accountant	J. GUZZARDO	957881	PBA	5	0	SHAW E & I	
Health and Safety Officer,	J. WALKER	70583	SSO	10	0	SHAW E & I	
Oversees all field activities for work shift	R. JOHNSON	810728	SUPV	5	0	SHAW E & I	
On excavator handling UXO for crew	G. COKER	957180	OP	10	0	SHAW E & I	
OFF SITE	M. CAMBELL	957096	OP	0	0	SHAW E & I	
Demil UXO items that are declared inert	S. JACKSON	1268971	RT	10	0	SHAW E & I	
Demil UXO items that are declared inert	L. MAHIQUES	956681	RT	10	0	SHAW E & I	
Demil UXO items that are declared inert	A. GRANT	792153	SR. UXO	10	0	SHAW E & I	
Demil UXO items that are declared inert	B. TINCKNELL	810829	UXO TECH	10	0	SHAW E & I	
Demil UXO items that are declared inert	D. ANDERSON	1252041	UXO TECH	10	0	SHAW E & I	
Travel hours					0		
Total travel hrs to date					42		
JOB SAFETY	JOB SAFETY MEETING HELD THIS DATE?	YES	WORK HOURS ON THIS DATE		90		
	ANY LOST TIME ACCIDENTS THIS DATE?	NO	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT		164		
TRENCHING/SCAFFOLDING/IV ELECTRICAL/HIGH WORK DONE?		NO	TOTAL WORK HOURS FROM SITE MANAGER		254		
WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?		NO					
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
SMO	SUNBELT	SHAW					
500 GAL TANK	AIR COMPRESSOR	1-GRAPPLE					
244 GAL DIESEL PURL	PARTNER SAW	1-POWER SCREEN					
	15LB CHIP HAMMER						

# **Enclosure 16** **Shaw E&I Daily Reports**

EQUIPMENT ON SITE					
<u>SHAW EQUIPMENT</u>	<u>CATERPILLAR</u>	<u>UNITED RENT</u>	<u>E &amp; P WELDERS</u>	<u>HERTZ</u>	<u>S&amp;O</u>
1-RENTAL CAR	2-320 EXCAVATORS	1-20KW GENERATOR	1-PLASMA CUTTER	1-SKIDSTER	500 GAL TANK
2-PICKUP			3-BOTTLES OXYGEN		
1-PETROLOGIN SYSTEM					
1-GRAPPLE	<u>ALCAN CAT</u>	<u>SUNBELT</u>	<u>GREENHORN</u>	<u>ALLIED</u>	
1-POWER SCREEN	1-950 LOADER	1-AIR COMPRESSOR	1-30CY DUMPSTER	1-20' CONEX	
		1-PARTNER SAW			
		1-15LB CHIP HAMMER			
REMARKS					
<p>Continue demil operation of UXO items at scrapyard</p> <p>Crew using 3 types of cutting devices, petrogen torch, plasma cutter, and partner saw.</p> <p>Received power screen today setting up late in the day, will have to complete set tomorrow.</p>					
CONTRACTORS SITE MANAGER			STEVE CARRIERE 11-15-02		
GOVERNMENT INSPECTOR			DATE 11.18.02		

**Enclosure 16**  
**Shaw E&I Daily Reports**

<b>CONTRACTOR QUALITY CONTROL REPORT</b>				Report No. 004		
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date 14-Nov-02		
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT		
<b>PREPARATORY</b>	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA		
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>			
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>			
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>			
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>			
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>			
	<b>INITIAL</b>	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>		<input type="checkbox"/>	NA
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>		<input type="checkbox"/>	
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>			
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>			
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>			
<b>FOLLOW-UP</b>		WORK COMPLIES WITH CONTRACT AS APPROVED INITIAL PHASE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; padding: 2px;">TESTING PERFORMED &amp; WHO PERFORMED TEST</div>	
		WORK COMPLIES WITH SAFETY REQUIREMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Demilitarization Continued cutting operation using the gas torch, and partner saw Only worked on items which had been identified for cutting Set up plasma saw and began using it also for cutting thinner items Began sorting through the pile of debris and identifying OE items These items were inspected by UXO and marked These items were then placed on the concrete pad for demilling					
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)			
REMARKS:  UXO Daily Log attached.						
<small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during the reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>				<div style="text-align: right;">   Ernie Duke - QC Manager </div>		
<b>GOVERNMENT QUALITY ASSURANCE REPORT</b>				DATE		
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				<div style="text-align: right;">   GOVERNMENT QUALITY ASSURANCE MANAGER </div>		
				11-15-02 DATE		
				11-18-02 DATE		



**Enclosure 16**  
**Shaw E&I Daily Reports**



**FIELD ACTIVITY**  
**DAILY LOG**

DAILY LOG	DATE	11	14	02
	NO.	0	0	3
	SHEET	1	OF	1

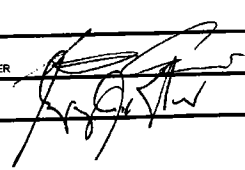
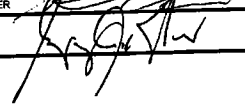
PROJECT NAME: <u>SITE 41 INDIAN HEAD MD</u>		PROJECT NO.: <u>83/866</u>
FIELD ACTIVITY SUBJECT: <u>SCRAPYARD UXO</u>		<u>69909230</u>
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:		
<p>0700 Tailgate</p> <p>0845 onsite - Set up for the day</p> <p>0810 Started cutting</p> <p>0900 Generator - air compressor - Portner Saw</p> <p>Came in</p> <p>0910 Tested portner saw on the Tar filled and plastic filled motors. It worked well. Tar filled ones are gumming up the saw. Will have to come up with a way to deal with that.</p> <p>1000 Plasma on line Working well.</p> <p>1100 Lunch</p> <p>1300 Back to work</p> <p>1500 Petrogen torch is down blowing O-Rings</p> <p>1530 Petrogen up.</p> <p>1600 Plasma down (NOT SURE WHY)</p> <p>1700 Hot work stopped for Day - Clean up</p> <p>1730 Second operator for the day.</p> <p align="center">NOTHING Follows</p>		
VISITORS ON SITE:		CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
FRANK JAMES		N/A
WEATHER CONDITIONS:		IMPORTANT TELEPHONE CALLS:
Cld Am Warm PM		N/A
IT PERSONNEL ON SITE: <u>A. GRANT Del ANDERSON B. SINKWELL</u>		
SIGNATURE: <u>[Signature]</u>		DATE: <u>11/14/02</u>

327C-12-98

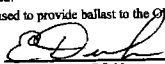
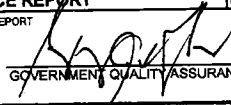
# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE:	15-Nov-02
(ATTACH ADDITIONAL SHEETS IF NECESSARY)						Project #	831866
CONTRACT NO.	N62478-97-D-5008		TITLE & LOCATION	SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND			
CONTRACTOR			SITE MANAGER				
SHAW E & I			STEVE CARRIERE				
WEATHER/ WEATHER EFFECTS			MAX TEMP:	MIN TEMP:			
Partly sunny			68	43			
<b>WORK PERFORMED TODAY</b>							
WORK LOCATION AND DESCRIPTION	NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER	
Management and oversight of project.	S. CARRIERE	957826	Site Manager	5	0	SHAW E & I	
Site Eng/ QC	E. DUKE	12898	ENG/QC	5	0	SHAW E & I	
Project accountant.	J. GUZZARDO	957881	PBA	5	0	SHAW E & I	
Health and Safety Officer,	J. WALKER	70583	SSO	10	0	SHAW E & I	
Oversees all field activities for work shift	R. JOHNSON	810728	SUPV	5	0	SHAW E & I	
On excavator handling UXO for crew	G. COKER	957180	OP	10	0	SHAW E & I	
Demil UXO items that are declared inert	M. CAMBELL	957096	OP	10	0	SHAW E & I	
Demil UXO items that are declared inert	S. JACKSON	1268971	RT	10	0	SHAW E & I	
Demil UXO items that are declared inert	L. MAHIQUES	956681	RT	10	0	SHAW E & I	
Demil UXO items that are declared inert	A. GRANT	792153	SR. UXO	10	0	SHAW E & I	
Demil UXO items that are declared inert	B. TINCKNELL	810829	UXO TECH	10	0	SHAW E & I	
Demil UXO items that are declared inert	D. ANDERSON	1252041	UXO TECH	10	0	SHAW E & I	
Travel hours					0		
			Total travel hrs to date		42		
JOB SAFETY	JOB SAFETY MEETING HELD THIS DATE?	YES	WORK HOURS ON THIS DATE	100			
	ANY LOST TIME ACCIDENTS THIS DATE?	NO	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT	254			
	TRENCHING/SCAFFOLDING/EV ELECTRICAL/HIGH WORK DONE?	NO	TOTAL WORK HOURS FROM SITE MANAGER	354			
	WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?	NO					
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
SMC      4-6 P. WELDING      GR CAPITAL 0 GAL DIESEL FUEL    9- BOTTLES OF OXYGEN    1-OFFICE TRAILER							

# **Enclosure 16** **Shaw E&I Daily Reports**

EQUIPMENT ON SITE					
<b>SHAW EQUIPMENT</b>	<b>CATERPILLAR</b>	<b>UNITED RENT</b>	<b>B &amp; B WELDERS</b>	<b>HERTZ</b>	<b>SMO</b>
1-RENTAL CAR	2-320 EXCAVATORS	1-20KW GENERATOR	1-PLASMA CUTTER	1-SKIDSTER	500 GAL. TANK
2-PICKUP			3-BOTTLES OXYGEN		
1-PETROGEN SYSTEM					
1-GRAPPLE	<b>ALCAN/CAT</b>	<b>SUNBELT</b>	<b>GREYHOUND</b>	<b>ALLIED</b>	<b>GE CAPITAL</b>
1-POWER SCREEN	1-450 LOADER	1-AIR COMPRESSOR	1-30CY DUMPSTER	1-20 CONEX	1-OFF TRAILER
		1-PARTNER SAW			
		1-15LB CHIP HAMMER			
<b>REMARKS</b> Continue demil operation of UXO items at scrapyard Crew using 3 types of cutting devices, petrogen torch, plasma cutter, and partner saw. Had UXO personnel identify and remove large UXO items that were visible from soil piles. Received and placed 8 x 32 office trailer in designated laydown area.					
<b>CONTRACTORS SITE MANAGER</b> 			<b>STEVE CARRIERE</b> 11-18-02		
<b>GOVERNMENT INSPECTOR</b> 			<b>DATE</b> 11-19-02		

**Enclosure 16**  
**Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL REPORT				Report No. 005		
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date 15-Nov-02		
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT		
<b>PREPARATORY</b>	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA		
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>			
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>			
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>			
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>			
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>			
	<b>INITIAL</b>	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>		<input type="checkbox"/>	NA
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>		<input type="checkbox"/>	
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>			
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>			
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH CONTRACT AS APPROVED INITIAL PHASE		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input checked="" type="checkbox"/>	<input type="checkbox"/>			
<b>FOLLOW-UP</b>	Demilitarization Continued cutting operation using the gas torch, plasma cutter and partner saw Only worked on items which had been identified for cutting Continued sorting through the pile of debris and identifying OE items These items were inspected by UXO and marked These items were then placed on the concrete pad for demilling			TESTING PERFORMED & WHO PERFORMED TEST		
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)				REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)		
REMARKS:  UXO Daily Log attached. RFI-001 for handling and disposing of the filler materials was submitted. Shawn Joergensen and Heidi Morgan onsite and discussed the fillers used to provide ballast to the OE items.  <small>On behalf of the contractor, I certify that this report is completed and correct and equipment used is rated used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>						
 Ernie Duke - QC Manager				11-18-02 DATE		
<b>GOVERNMENT QUALITY ASSURANCE REPORT</b>				DATE		
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				DATE		
 GOVERNMENT QUALITY ASSURANCE MANAGER				11-19-02 DATE		

**Enclosure 16**  
**Shaw E&I Daily Reports**



**FIELD ACTIVITY**  
**DAILY LOG**

DAILY LOG	DATE	11	15	02
	NO.	0	0	4
	SHEET	1	OF	1

PROJECT NAME: <u>Site 41 Scrap Yard</u>		PROJECT NO.: <u>83/B66</u>
FIELD ACTIVITY SUBJECT: <u>DE Demil</u>		<u>69909230</u>
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:		
<p>0700 Tailgate 0730 on-site began work</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Cut up 14 INERT MISSILE MOTORS 3 INERT 2.75" Rocket Motors 23 JATO BOTTLES 2 BULL PUP WARHEADS</p> </div> <p>1200 STOPPED LUNCH 1330 EVERYONE BACK TO WORK 1500 Plasma cutter down BAD Ground 1700 Hot work ceased 1/2 Hour of FIRE WATCH 1730 Seamed operators for the day</p> <p align="center"><i>Nothing Follows</i></p>		
VISITORS ON SITE: <u>N/A</u>		CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: <u>N/A</u>
WEATHER CONDITIONS: <u>Cool</u>		IMPORTANT TELEPHONE CALLS:
IT PERSONNEL ON SITE: <u>A. GAMES, D. ANDERSON, B. FINCKNELL</u>		
SIGNATURE: <u>[Signature]</u>		DATE: <u>11/18/02</u>

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE:	18-Nov-02
(ATTACH ADDITIONAL SHEETS IF NECESSARY)						Project #	831866
CONTRACT NO.	TITLE & LOCATION		SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND				
CONTRACTOR SHAW E & I			SITE MANAGER STEVE CARRIERE				
WEATHER/ WEATHER EFFECTS Partly sunny			MAX TEMP: 58	MIN TEMP: 40			
WORK PERFORMED TODAY							
WORK LOCATION AND DESCRIPTION	NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER	
Management and oversight of project	S. CARRIERE	957826	Site Manager	5	0	SHAW E & I	
Site Eng/ QC	E. DUKE	12898	ENG/QC	5	0	SHAW E & I	
Project accountant	J. GUZZARDO	957881	PBA	5	0	SHAW E & I	
Health and Safety Officer,	J. WALKER	70583	SSO	10	0	SHAW E & I	
Oversees all field activities for work shift	R. JOHNSON	810728	SUPV	5	0	SHAW E & I	
On excavator handling UXO for crew	G. COKER	957180	OP	10	0	SHAW E & I	
Demil UXO items that are declared inert	M. CABBELL	957096	OP	10	0	SHAW E & I	
Demil UXO items that are declared inert	S. JACKSON	1268971	RT	10	0	SHAW E & I	
Demil UXO items that are declared inert	L. MAHIQUES	956681	RT	10	0	SHAW E & I	
Demil UXO items that are declared inert	G.BELL		RT	10	6	SHAW E & I	
Demil UXO items that are declared inert	A. GRANT	792153	SR UXO	10	0	SHAW E & I	
Demil UXO items that are declared inert	B. TINCKNELL	810829	UXO TECH	10	0	SHAW E & I	
Demil UXO items that are declared inert	D. ANDERSON	1252041	UXO TECH	10	0	SHAW E & I	
Travel hours					6		
					Total travel hrs to date	48	
JOB SAFETY	JOB SAFETY MEETING HELD THIS DATE?	YES	WORK HOURS ON THIS DATE		110		
	ANY LOST TIME ACCIDENTS THIS DATE?	NO	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT		354		
	TRENCHING/SCAFFOLDING/HV ELECTRICAL/HIGH WORK DONE?	NO	TOTAL WORK HOURS FROM SITE MANAGER		464		
WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE? NO							
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
SMO                      4-6 R WELDING                      SUBMIT 10 GAL DIESEL FUEL                      1-PARTNER SAW							

**Enclosure 16**  
**Shaw E&I Daily Reports**

EQUIPMENT ON SITE					
<u>SHIP EQUIPMENT</u>	<u>CATERPILLAR</u>	<u>UNITED RENT</u>	<u>B &amp; B WELDERS</u>	<u>HERTZ</u>	<u>SMO</u>
1-RENTAL CAR	2-320 EXCAVATORS	1-20KW GENERATOR	1-PLASMA CUTTER	1-SKIDSTER	500 GAL TANK
2-PICKUP					
1-PETROGEN SYSTEM					
1-GRAPPLE	<u>ALBANY CAT</u>	<u>SUNBELT</u>	<u>GERTHOUD</u>	<u>ALTEC</u>	<u>GE CAPITAL</u>
1-POWER SCREEN	1-550 LOADER	1-AIR COMPRESSOR	1-30CY DUMPSTER	1-20 CONEX	1-OFF-TRAILER
		2-PARTNER SAW			
		1-15LB CHIP HAMMER			
<p>REMARKS</p> <p>Continue demil operation of UXO items at scrapyard</p> <p>Crew using 3 types of cutting devices, petrogen torch, plasma cutter, and partner saw.</p> <p>Brought in a slice cutter machine to try first thing tomorrow, thick metal items take time to cut through.</p>					
CONTRACTORS SITE MANAGER			STEVE CARRIERE		
GOVERNMENT INSPECTOR			DATE 11-19-02		

CONTRACTOR QUALITY CONTROL REPORT				Report No. 006		
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date 18-Nov-02		
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT		
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA		
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>			
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>			
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>			
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>			
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>			
	INITIAL	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>		<input type="checkbox"/>	NA
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>		<input type="checkbox"/>	
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>			
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>			
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>			
FOLLOW-UP		WORK COMPLIES WITH CONTRACT AS APPROVED INITIAL PHASE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TESTING PERFORMED & WHO PERFORMED TEST	
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
	Demilitarization Continued cutting operation using the gas torch, plasma cutter and partner saw Only worked on items which had been identified for cutting Continued sorting through the pile of debris and identifying OE items These items were inspected by UXO and marked These items were then placed on the concrete pad for demilting					
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)			
REMARKS:  UXO Daily Log attached. George Bell, Shaw onsite to troubleshoot and demonstrate most effective way to use gas torch.						
On behalf of the contractor, I certify that this report is completed and correct and equipment and materials used and work performed during the reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.						
GOVERNMENT QUALITY ASSURANCE REPORT QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				DATE 11-19-02		
GOVERNMENT QUALITY ASSURANCE MANAGER				DATE 11-20-02		



**Enclosure 16**  
**Shaw E&I Daily Reports**



**FIELD ACTIVITY  
DAILY LOG**

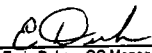

DAILY LOG	DATE	11	18	02
	NO.	0	0	5
	SHEET	1 OF 1		

PROJECT NAME: <u>SITE 4 SCRAP YARD</u>		PROJECT NO.: <u>831866</u>
FIELD ACTIVITY SUBJECT: <u>OE DEMIL</u>		
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:		
<p>0630 TRAILGATE</p> <p>0700 opened the gate Set up for the day</p> <p>0715 Start work</p> <p><del>Cutters on site</del></p> <p>George Bell on site</p> <p>dialed in the Gas Torch</p> <p>0800 Worked with the Cutting Crew</p> <p>1200 Lunches Staged</p> <p>1230 Everyone Back at work</p> <p>1330 Continued work</p> <p>1530 out of AIR</p> <p>1630 Shut down the Hot work</p> <p>30 min FIRE APPROX</p> <p>1700 Scramel operations for the day</p>	<p><u>ITEMS REMOVED</u></p> <p>5 Projectiles</p> <p>26 JATO Batteries</p> <p>11 Bombs</p> <p>2 <del>Rockets</del> Rocket Warheads</p> <p>1 <del>Scrap</del> Mine</p> <p>2 FLARES</p>	
<p align="center"><del>NOTHING FOUND</del></p>		
VISITORS ON SITE:		CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
<p><u>GEORGE BELL</u></p>		
WEATHER CONDITIONS:		IMPORTANT TELEPHONE CALLS:
<p>Cold AM</p> <p>WARM PM</p>		
IT PERSONNEL ON SITE: <u>A. L. L. L. L.</u>		DATE: <u>11/18/02</u>
SIGNATURE: <u>[Signature]</u>		

327C-12-98

# Enclosure 16

## Shaw E&I Daily Reports

CONTRACTOR QUALITY CONTROL REPORT				Report No.	007			
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date	19-Nov-02			
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT				
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA				
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>					
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>					
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>					
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>					
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>					
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>					
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>					
	INITIAL	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>			<input type="checkbox"/>	NA	
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>			<input type="checkbox"/>		
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>					
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>					
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>					
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>					
TESTING PERFORMED & WHO PERFORMED TEST								
FOLLOW-UP	WORK COMPLIES WITH CONTRACT AS APPROVED INITIAL PHASE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TESTING PERFORMED & WHO PERFORMED TEST				
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
Demilitarization Continued cutting operation using the gas torch, plasma cutter and partner saw Only worked on items which had been identified for cutting Continued sorting through the pile of debris and identifying OE items These items were inspected by UXO and marked These items were then placed on the concrete pad for demilling								
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)				REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)				
REMARKS:								
UXO Daily Log attached. George Bell, Shaw onsite to assist and help demonstrate most effective way to use gas torch.  <small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>								
 Emie Duke - QC Manager				11-20-02 DATE				
GOVERNMENT QUALITY ASSURANCE REPORT				DATE				
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				DATE				
 GOVERNMENT QUALITY ASSURANCE MANAGER				11-20-02 DATE				

**Enclosure 16**  
**Shaw E&I Daily Reports**



**FIELD ACTIVITY  
DAILY LOG**

DAILY LOG	DATE	11	19	02
	NO.	0	0	6
	SHEET	1	OF	1

PROJECT NAME: <u>SITE 41 Scrap Yard</u>		PROJECT NO.: <u>831866</u>
FIELD ACTIVITY SUBJECT: <u>OE Demol</u>		
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:		
<p>0630 Tailgate</p> <p>0700 on site setup for the day</p> <p>0715 Start work</p> <p>0900 Plasma cutters down</p> <p>Back ground clamp</p> <p>1000 Air Run out - NGED cutting wheel</p> <p>1230 Plasma up</p> <p>Air IN TORCH UP</p> <p>Cutting Wheels in Saws up</p> <p>1235 continued work</p> <p>1630 Stopped all Hot work</p> <p>30 min Fire Watch</p> <p>1700 Secured operations for the day</p>		<p><u>Items Demol:</u></p> <p>8 ea Projectiles</p> <p>33 ea VAD Bottles</p> <p>18 ea Rocket Motors</p>
<p align="center"><i>Nothing follows</i></p>		
VISITORS ON SITE:		CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:
N/A		N/A
WEATHER CONDITIONS:		IMPORTANT TELEPHONE CALLS:
Cold AM Cool PM		
IT PERSONNEL ON SITE: <u>A. GRANT, B. TINKNEU, D. ANDERSON</u>		
SIGNATURE: <u>[Signature]</u>		DATE: <u>11/19/02</u>

3270-12-00

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE:	20-Nov-02
(ATTACH ADDITIONAL SHEETS IF NECESSARY)						Project #	831866
CONTRACT NO.		TITLE & LOCATION		REPORT NO.		008	
N62470-97-D-5800		SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND					
CONTRACTOR				SITE MANAGER			
SHAW E & I				STEVE CARRIERE			
WEATHER/WEATHER EFFECTS				MAX TEMP:	MIN TEMP:		
Partly sunny				58	36		
WORK PERFORMED TODAY							
WORK LOCATION AND DESCRIPTION	NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER	
Management and oversite of project.	S. CARRIERE	957826	Site Manager	5	0	SHAW E & I	
Site Eng/ QC	E. DUKE	12898	ENG/QC	5	0	SHAW E & I	
Project accountant.	I. GUZZARDO	957881	PBA	5	0	SHAW E & I	
Health and Safety Officer.	J. WALKER	70583	SSO	10	0	SHAW E & I	
Oversees all field activities for work shift	R. JOHNSON	810728	SUPV	5	0	SHAW E & I	
On excavator handling UXO for crew	G. COKER	957180	OP	10	0	SHAW E & I	
Demil UXO items that are declared inert (cutoff saw)	M. CAMPBELL	957096	OP	10	0	SHAW E & I	
Demil UXO items that are declared inert (petrogen torch)	S. JACKSON	1268971	RT	10	0	SHAW E & I	
Demil UXO items that are declared inert (cutoff saw)	L. MAHIQUES	956681	RT	10	0	SHAW E & I	
off site	G.BELL		RT	0	7	SHAW E & I	
Demil UXO items that are declared inert (petrogen torch)	A. GRANT	792153	SR. UXO	10	0	SHAW E & I	
Demil UXO items that are declared inert (inspection)	B. TINCKNELL	810829	UXO TECH	10	0	SHAW E & I	
Demil UXO items that are declared inert (plasma cutter)	D. ANDERSON	1252041	UXO TECH	10	0	SHAW E & I	
Travel hours					7		
				Total travel hrs to date		55	
JOB SAFETY	JOB SAFETY MEETING HELD THIS DATE?		YES	WORK HOURS ON THIS DATE		100	
	ANY LOST TIME ACCIDENTS THIS DATE?		NO	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT		575	
	TRENCHING/SCAFFOLDING/HV ELECTRICAL/HIGH WORK DONE?		NO	TOTAL WORK HOURS FROM SITE MANAGER		675	
	WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?		NO				
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
SMC	ALAN RENT	SHAW EQUIP					
0 GAL DIESEL FUEL	1-LOADER	1-POWER SCREEN					
	OFF RENT	OFF RENT					

**Enclosure 16**  
**Shaw E&I Daily Reports**

EQUIPMENT ON SITE					
<u>SHAW EQUIPMENT</u>	<u>CATERPILLAR</u>	<u>UNITED RENT</u>	<u>E &amp; R WELDERS</u>	<u>HERTZ</u>	<u>SMC</u>
1-RENTAL CAR	2-320 EXCAVATORS	1-20KW GENERATOR	1-PLASMA CUTTER	1-SKIDSTER	500 GAL. TANK
2-PICKUP					
1-PETROGEN SYSTEM					
1-GRAPPLE	<u>ALBANY CAT</u>	<u>SUNBELT</u>	<u>GREENHOUND</u>	<u>ALLIED</u>	<u>GE CAPITAL</u>
		1-AIR COMPRESSOR	1-30CY DUMPSTER	1-20' CONEX	1-OFF-TRAILER
		2-PARTNER SAW			
		1-15LB CHIP HAMMER			
<p>REMARKS</p> <p>Continue demil operation of UXO items at scrapyard</p> <p>Crew using 3 types of cutting devices, petrogen torch, plasma cutter, and partner saw.</p> <p>Going through dirt piles for UXO items for demil.</p>					
<p>CONTRACTORS SITE MANAGER </p>			<p>STEVE CARRIERE 11-21-02</p>		
<p>GOVERNMENT INSPECTOR</p>			<p>DATE</p>		

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL REPORT				Report No.	008			
Shaw E & I, Inc. Project No 831866 CONTRACT: N62470-97-D-5000 D.O. #077				Date	20-Nov-02			
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT				
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA				
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>					
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>					
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>					
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>					
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>					
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>					
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>					
	INITIAL	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>			<input type="checkbox"/>	NA	
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>			<input type="checkbox"/>		
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>					
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>					
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>					
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>					
PERFORMED TEST								
FOLLOW-UP		WORK COMPLIES WITH CONTRACT AS APPROVED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	TESTING PERFORMED & WHO PERFORMED TEST			
	INITIAL PHASE							
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
	Demilitarization Continued cutting operation using the gas torch, plasma cutter and partner saw Only worked on items which had been identified for cutting Continued sorting through the pile of debris and identifying OE items These items were inspected by UXO and marked These items were then placed on the concrete pad for demilling							
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)					
REMARKS: Received response to RFI-001 for OE filler material. UXO Daily Log attached.								
<small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during the reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>				11-21-02 DATE				
<b>GOVERNMENT QUALITY ASSURANCE REPORT</b>				DATE				
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT				11-21-02 DATE				
GOVERNMENT QUALITY ASSURANCE MANAGER				DATE				

# **Enclosure 16** **Shaw E&I Daily Reports**



IT CORPORATION  
A Member of The IT Group

## **FIELD ACTIVITY** **DAILY LOG**

DAILY LOG	DATE	11	20	02
	NO.	0	0	'7
	SHEET	1	OF	1

PROJECT NAME: <u>SITE 41 SIMAPYARD</u>		PROJECT NO: <u>831 866</u>
FIELD ACTIVITY SUBJECT: <u>OE DEMIL</u>		
DESCRIPTION OF DAILY ACTIVITIES AND EVENTS:		
<p>0630 Tailgate  0700 ON SITE - TOOL SETUP.  0705 START WORK  1130 STALEARD LUNCH  1330 ALL BACK TO WORK  1630 Stopped all Network 30m wait  1700 FINISHED WORK FOR THE DAY</p> <div style="border: 1px solid black; padding: 5px; float: right; margin-top: 20px;"> <p>27ea Rocket Warheads  28ea Projectiles  7ea Rocket Motors  2 ea Missile Warheads  10 ea Flame Canisters</p> </div> <p style="text-align: center; margin-top: 50px;"><i>Nothing follows</i></p>		
VISITORS ON SITE:	CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:	
N/A	N/A	
WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:	
Cold AM NICE PM	N/A	
IT PERSONNEL ON SITE: <u>A. GRANT, B. THICKNELL, D. ANDERSON</u>		
SIGNATURE:	DATE: <u>11/20/02</u>	

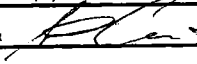
327C-12-98

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR PRODUCTION REPORT						DATE: 21-Nov-02	
(ATTACH ADDITIONAL SHEETS IF NECESSARY) Project # 831866						REPORT NO. 009	
CONTRACT NO. N62478-97-D-5008		TITLE & LOCATION SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND					
CONTRACTOR SHAW E & I				SITE MANAGER STEVE CARRIERE			
WEATHER/WEATHER EFFECTS Partly sunny				MAX TEMP: 63		MIN TEMP: 34	
<b>WORK PERFORMED TODAY</b>							
WORK LOCATION AND DESCRIPTION		NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER
Management and oversight of project		S. CARRIERE	957826	Site Manager	5	0	SHAW E & I
Site Eng/ QC		E. DUKE	12898	ENG/QC	5	0	SHAW E & I
Project accountant		J. GUZZARDO	957881	PBA	5	0	SHAW E & I
Health and Safety Officer,		J. WALKER	70583	SSO	10	0	SHAW E & I
Oversees all field activities for work shift		R. JOHNSON	810728	SUPV	5	0	SHAW E & I
On excavator handling UXO for crew		G. COKER	957180	OP	10	0	SHAW E & I
Demil UXO items that are declared inert (cutoff saw)		M. CAMPBELL	957096	OP	10	0	SHAW E & I
Demil UXO items that are declared inert (petrogen torch)		S. JACKSON	1268971	RT	10	0	SHAW E & I
Demil UXO items that are declared inert (cutoff saw)		L. MAHIQUES	956681	RT	10	0	SHAW E & I
off site		G.BELL		RT	0	0	SHAW E & I
Demil UXO items that are declared inert (petrogen torch)		A. GRANT	792153	SR UXO	10	0	SHAW E & I
Demil UXO items that are declared inert (inspection)		B. TINCKNELL	810829	UXO TECH	10	0	SHAW E & I
Demil UXO items that are declared inert (plasma cutter)		D. ANDERSON	1252041	UXO TECH	10	0	SHAW E & I
Travel hours						0	
		Total travel hrs to date				55	
JOB SAFETY	JOB SAFETY MEETING HELD THIS DATE?	YES	WORK HOURS ON THIS DATE		100		
	ANY LOST TIME ACCIDENTS THIS DATE?	YES	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT		675		
	TRENCHING/SCAFFOLDING/HV ELECTRICAL/HIGH WORK DONE?	NO	TOTAL WORK HOURS FROM SITE MANAGER		775		
	WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?	NO					
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
SMO							
0 GAL DIESEL FUEL							



## Enclosure 16 Shaw E&I Daily Reports

EQUIPMENT ON SITE					
<b>SHAW EQUIPMENT</b>	<b>CATERPILLAR</b>	<b>UNITED RENT</b>	<b>E &amp; R WELDERS</b>	<b>HERTZ</b>	<b>S&amp;D</b>
1-RENTAL CAR	2-300 EXCAVATORS	1-200KW GENERATOR	1-PLASMA CUTTER	1-SKIDSTER	500 GAL TANK
2-PICKUP					
1-PETROGEN SYSTEM					
1-GRAFFLE	<b>ALAN CAT</b>	<b>SUNBELT</b>	<b>GREYHOUND</b>	<b>ALLIED</b>	<b>GE CAPITAL</b>
		1-AIR COMPRESSOR	1-30CY DUMPSTER	1-20' CONEX	1-OFF TRAILER
		2-PARTNER SAW			
		1-15LB CHIP HAMMER			
<b>REMARKS</b>  Continue demil operation of OE items at scrapyard Crew using 3 types of cutting devices, petrogen torch, plasma cutter, and partner saw. Going through dirt piles for OE items for demil. Load out 1 roll off of scrap steel from demil OE items At approx 1400 hrs an accident shut down site. OE item exploded while demilling. See attach for accident reports. Two Shaw personnel were taken to hospitals. EMT's on the scene denied Shaw the right to send a responsible party with the injured victims The navy requested all Shaw employee's to return to site 12 trailer for statements.					
CONTRACTORS SITE MANAGER 			STEVE CARRIERE <span style="float: right;">11-22-02</span>		
GOVERNMENT INSPECTOR			DATE		

# **Enclosure 16** **Shaw E&I Daily Reports**

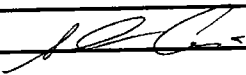
CONTRACTOR QUALITY CONTROL REPORT				Report No.	009	
Shaw E & I, Inc. CONTRACT: N62470-97-D-5000 D.O. #077				Date	21-Nov-02	
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT		
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA		
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>			
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>			
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>			
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>			
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>			
	INITIAL	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>	NA	
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>	<input type="checkbox"/>		
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>			
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>			
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>			
FOLLOW-UP		WORK COMPLIES WITH CONTRACT AS APPROVED INITIAL PHASE	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
	Demilitarization Continued cutting operation using the gas torch, plasma cutter, and partner saw Only worked on items that had been identified for cutting Continued sorting through the debris piles and identifying OE items OE items were inspected by UXO personnel and marked OE items identified as safe for demilitarization were placed on the concrete pad					
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)			REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)			
<b>REMARKS:</b> QC Meeting held at Site 12 trailer at 1030. Site shut down at approximately 1400 due to ordnance explosion accident. Steve Jackson was taken to Washington Hospital Center for emergency treatment. Albert Grant was taken to Fort Washington Hospital for examination and treatment and released.						
<small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>						
Signature: <u>James H. Hargis for</u> Title: <u>Duke - QC Manager</u>				DATE: <u>11-25-02</u>		
GOVERNMENT QUALITY ASSURANCE REPORT				DATE		
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT						
GOVERNMENT QUALITY ASSURANCE MANAGER				DATE		

## Enclosure 16

### Shaw E&I Daily Reports

CONTRACTOR PRODUCTION REPORT						DATE: 25-Nov-02	
(ATTACH ADDITIONAL SHEETS IF NECESSARY) Project # 831866						REPORT NO. 011	
CONTRACT NO. N62478-97-D-5000		TITLE & LOCATION SITE 41 SCRAP YARD, INDIAN HEAD NSWC, MARYLAND					
CONTRACTOR SHAW E & I				SITE MANAGER STEVE CARRIERE			
WEATHER/ WEATHER EFFECTS Partly sunny				MAX TEMP. 61		MIN TEMP. 32	
WORK PERFORMED TODAY							
WORK LOCATION AND DESCRIPTION		NAME	NUMBER	TRADE	HOURS	TRAVEL HRS	EMPLOYER
Management and oversight of project.		S. CARRIERE	957826	Site Manager	3	0	SHAW E & I
Site Eng/ QC		E. DUKE	12898	ENG/QC	0	0	SHAW E & I
Site Eng/ QC		J. STASZAK		ENG/QC	0	0	SHAW E & I
Project accountant.		J. GUZZARDO	957881	PBA	0	0	SHAW E & I
Health and Safety Officer.		J. WALKER	70583	SSO	10	0	SHAW E & I
Oversees all field activities for work shift		R. JOHNSON	810728	SUPV	0	0	SHAW E & I
Site shut down for investigation.		G. COKER	957180	OP	9	0	SHAW E & I
Site shut down for investigation.		M. CAMPBELL	957096	OP	9	0	SHAW E & I
In hospital for treatment		S. JACKSON	1268971	RT	0	0	SHAW E & I
Site shut down for investigation.		L. MAHIQUES	956681	RT	9	0	SHAW E & I
off site		G. BELL		RT	0	0	SHAW E & I
Site shut down for investigation.		A. GRANT	792153	SR. UXO	9	0	SHAW E & I
Site shut down for investigation.		B. TINCKNELL	810829	UXO TECH	9	0	SHAW E & I
Site shut down for investigation.		D. ANDERSON	1252041	UXO TECH	9	0	SHAW E & I
Travel hours						0	
		Total travel hrs to date				55	
JOB SAFETY	JOB SAFETY MEETING HELD THIS DATE?	YES	WORK HOURS ON THIS DATE		67		
	ANY LOST TIME ACCIDENTS THIS DATE?	YES	CUMULATIVE TOTAL OF WORK HRS FROM PREVIOUS REPORT		856		
	TRENCHING/CAVING/POUNDING/HV ELECTRICAL/HIGH WORK DONE?	NO	TOTAL WORK HOURS FROM SITE MANAGER		923		
	WERE THERE ANY NEAR MISS ACCIDENTS ON THIS DATE?	NO					
(ATTACH REPORTS OR PROPOSED ACTIONS AS NECESSARY)							
LIST SAFETY ACTIONS TAKEN TODAY/SAFETY INSPECTIONS CONDUCTED							
Daily Safety Meeting, and safety observer program in affect.							
EQUIPMENT/MATERIAL RECEIVED TODAY TO BE INCORPORATED IN JOB							
SMO 0 GAL DIESEL FUEL							

# **Enclosure 16** **Shaw E&I Daily Reports**

<b>EQUIPMENT ON SITE</b>					
<u>SHAW EQUIPMENT</u>	<u>CATERPILLAR</u>	<u>UNITED RENT</u>	<u>B &amp; R WELDERS</u>	<u>HERTZ</u>	<u>SMG</u>
1-RENTAL CAR	2-320 EXCAVATORS	1-20KW GENERATOR	1-PLASMA CUTTER	1-SKIDSTER	500 GAL TANK
2-PICKUP					
1-PETROGEN SYSTEM					
1-GRAPPLE	<u>ALCAN CAT</u>	<u>SUNBELT</u>	<u>GREYHOUND</u>	<u>ALLIED</u>	<u>GE CAPITAL</u>
		1-AIR COMPRESSOR	1-30CY DUMPSTER	1-20' CONEX	1-OFF-TRAILER
		2-PARTNER SAW			
		1-15LB CHIP HAMMER			
<b>REMARKS</b>					
Site has been shut down due to accident on 11-21-02					
Crew on standby awaiting questioning from navy as well as Shaw investigation team					
Site is off limits till investigation is complete.					
<b>CONTRACTORS SITE MANAGER</b>			<b>STEVE CARRIERE</b>		
			11-26-02		
<b>GOVERNMENT INSPECTOR</b>			<b>DATE</b>		

# **Enclosure 16** **Shaw E&I Daily Reports**

CONTRACTOR QUALITY CONTROL REPORT				Report No. 011		
Shaw E & I, Inc. CONTRACT: N62470-97-D-5000 D.O. #077				Date 25-Nov-02		
PHASE	(BLANK - NOT APPLICABLE)	YES	NO	IDENTIFY SPECIFICATION SECTION, DEFINABLE FEATURE OF WORK, LOCATION AND LIST PERSONNEL PRESENT		
PREPARATORY	PLANS AND SPECS HAVE BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>	NA		
	THE SUBMITTALS HAVE BEEN APPROVED	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS COMPLY WITH APPROVED SUBMITTALS	<input type="checkbox"/>	<input type="checkbox"/>			
	MATERIALS STORED PROPERLY	<input type="checkbox"/>	<input type="checkbox"/>			
	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>	<input type="checkbox"/>			
	TESTING PLAN HAS BEEN REVIEWED	<input type="checkbox"/>	<input type="checkbox"/>			
	WORK METHOD AND SCHEDULE DISCUSSED	<input type="checkbox"/>	<input type="checkbox"/>			
	JOB SAFETY / HAZARD ANALYSIS ADDRESSED	<input type="checkbox"/>	<input type="checkbox"/>			
	INITIAL	PRELIMINARY WORK WAS DONE CORRECTLY	<input type="checkbox"/>		<input type="checkbox"/>	NA
		SAMPLE HAS BEEN PREPARED/APPROVED	<input type="checkbox"/>		<input type="checkbox"/>	
WORKMANSHIP IS SATISFACTORY		<input type="checkbox"/>	<input type="checkbox"/>			
TEST RESULTS ARE ACCEPTABLE		<input type="checkbox"/>	<input type="checkbox"/>			
WORK IS IN COMPLIANCE WITH THE CONTRACT		<input type="checkbox"/>	<input type="checkbox"/>			
WORK COMPLIES WITH SAFETY REQUIREMENTS		<input type="checkbox"/>	<input type="checkbox"/>			
TESTING PERFORMED & WHO PERFORMED TEST						
FOLLOW-UP	WORK COMPLIES WITH CONTRACT AS APPROVED	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NA		
	INITIAL PHASE					
	WORK COMPLIES WITH SAFETY REQUIREMENTS	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
REWORK ITEMS IDENTIFIED TODAY (NOT CORRECTED BY CLOSE OF BUSINESS)		REWORK ITEMS CORRECTED TODAY (FROM REWORK ITEMS LIST)				
REMARKS: No work due to ongoing accident investigation.						
<small>On behalf of the contractor, I certify that this report is completed and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge except as noted in this report.</small>				DATE		
GOVERNMENT QUALITY ASSURANCE REPORT				DATE		
QUALITY ASSURANCE REPRESENTATIVE'S REMARKS AND/OR EXCEPTIONS TO THE REPORT						
GOVERNMENT QUALITY ASSURANCE MANAGER				DATE		

[illegible]

Code # 112B

Name ALBERT C. GRANT

**Signature**

Witness Joseph S. Minter *Joseph S. Minter*  
I certify that the items were demilitarized  
in accordance with DOD 4160-M-1 and other  
applicable regulations. These items contain  
nothing of a hazardous or dangerous nature.

~~The property listed hereon has been purchased from industrial fund monies. Any proceeds from the sale of this item is to be deposited to NANSUR/WARREN fund 97Y4930. NNAF.~~

**Enclosure 18 – Work Order for 12-inch Projectile to be placed into Scrap Yard.**

N62477-99-D-3521  
CONTRACT SUPPORT REQUEST

SER. NO. 3521- 0263 DATE: 10-29-02 TIME: 1040

POINT OF CONTACT: Frank James COST CENTER: 04

PHONE#/PAGER# 1523 CHARGE NO. 7096424

FFP LINE ITEM NO. \_\_\_\_\_ 1AA \_\_\_\_\_ 1AD \_\_\_\_\_ 1AC \_\_\_\_\_ (OTHER)

DATE/TIME SERVICE REQUIRED: NLT COB TODAY 1 HR RESPONSE REQ'D \_\_\_\_\_

(CHOOSE ONE) DATE AND TIME 10-29-02 ASAP EMERGENCY: \_\_\_\_\_

WORK DESCRIPTION: P/U + discard inert piece of ordnance

LOCATION: side of Dashiell Rd. near Maring to Scrapyard  
(BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS: \_\_\_\_\_

ICN NUMBER(IF APPLICABLE) \_\_\_\_\_ MSDS# \_\_\_\_\_

SAFETY PERMIT REQUIRED? \_\_\_\_\_ (YES) ✓ (NO)  
WORK COVERED BY SOP? \_\_\_\_\_ (YES) ✓ (NO)

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE \_\_\_\_\_ TIME COMPLETED \_\_\_\_\_  
TIME READY FO NEXT TASK: \_\_\_\_\_ COMPLETION DATE: \_\_\_\_\_  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: \_\_\_\_\_  
PERSONNEL ASSIGNED TO THIS TASK: \_\_\_\_\_

21-99-3521

# Enclosure 18 – Work Order for 12-inch Projectile to be placed into Scrap Yard.

\*\*\*\*\* -COMM. JOURNAL- \*\*\*\*\* DATE OCT-29-2002 \*\*\*\* TIME 11:47 \*\*\*\*\*

MODE = MEMORY TRANSMISSION

START=OCT-29 11:46

END=OCT-29 11:47

FILE NO.=726

STN NO.	COMM.	ONE-TOUCH/ ABBR NO.	STATION NAME/EMAIL ADDRESS/TELEPHONE NO.	PAGES	DURATION
001	OK	<01>	LBM	001/001	00:00:54

-CONTRACTS BRANCH -

\*\*\*\*\* -NSWC IHD - \*\*\*\*\* 301 744 4949- \*\*\*\*\*

N62477-99-D-3521

## CONTRACT SUPPORT REQUEST

SER. NO. 3521- 0263 DATE: 10-29-02 TIME: 1040

POINT OF CONTACT: Frank James COST CENTER: 04

PHONE#PAGER# 1523 CHARGE NO. 7096404

FFP LINE ITEM NO. 1AA AD 1AC (OTHER)

DATE/TIME SERVICE REQUIRED: WLT COB TODAY 1 HR RESPONSE REQ'D

(CHOOSE ONE) DATE AND TIME 10-29-02 ASAP EMERGENCY:

WORK DESCRIPTION: P/U + discard inert piece of ordnance

LOCATION: side of Dashiell Rd. near Maring to Scrapyard  
(BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS:

ICN NUMBER(IF APPLICABLE) MSDS#

SAFETY PERMIT REQUIRED? (YES) ✓ (NO)  
WORK COVERED BY SOP? (YES) ✓ (NO)

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: DATE TIME  
COMMENTS:

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE TIME COMPLETED  
TIME READY FOR NEXT TASK: COMPLETION DATE:  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK:  
PERSONNEL ASSIGNED TO THIS TASK:

21-99-3521



**Enclosure 18 – Work Order for 12-inch Projectile to be placed into Scrap Yard.**

N62477-99-D-3521

**CONTRACT SUPPORT REQUEST**

SER. NO. 3521- 0263 DATE: 10-29-02 TIME: 1040

POINT OF CONTACT: Frank James COST CENTER: 04

PHONE#PAGER# 1523 CHARGE NO. 7096424

FFP LINE ITEM NO. 1AA AD 1AC (OTHER)

DATE/TIME SERVICE REQUIRED: ULT COB TODAY 1 HR RESPONSE REQ'D

(CHOOSE ONE) DATE AND TIME 10-29-02 ASAP EMERGENCY:

WORK DESCRIPTION: P/U + discard inert piece of ordnance

LOCATION: side of Dashiell Rd. near Maring to Scrapyard  
(BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS:

ICN NUMBER (IF APPLICABLE) MSDS#

SAFETY PERMIT REQUIRED? (YES) ✓ (NO)  
WORK COVERED BY SOP? (YES) ✓ (NO)

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: DATE TIME  
COMMENTS:

(TO BE COMPLETED BY CONTRACTOR)  
TIME ARRIVED ON SITE: 14:00 TIME COMPLETED: 15:00  
TIME READY FOR NEXT TASK: COMPLETION DATE: 10-29-02  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: 1  
PERSONNEL ASSIGNED TO THIS TASK:

Slaughter

21-99-3521

TOTAL F.01

Enclosure 19  
MIL-STD-2105B, Hazard Assessment Test for Non-Nuclear Munitions

MIL-STD-2105B ■ 9999911 0472790 194 ■

**METRIC**

**MIL-STD-2105B**  
**12 January 1994**  
**SUPERSEDING**  
**MIL-STD-2105A(NAVY)**  
**8 March 1991**

**MILITARY STANDARD**  
**HAZARD ASSESSMENT TESTS**  
**FOR NON-NUCLEAR MUNITIONS**



AMSC N6037

AREA SAFT

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**Enclosure 19**  
**MIL-STD-2105B, Hazard Assessment Test for Non-Nuclear Munitions**

MIL-STD-2105B ■ 9999911 0472791 020 ■

**MIL-STD-2105B**

**FOREWORD**

1. This military standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Indian Head Division, Naval Surface Warfare Center, Standardization Branch (Code 8420), Indian Head, MD 20640-5035, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.
3. This document contains a description of tests for the assessment of munition safety and insensitive munitions (IM) characteristics of non-nuclear munitions. Historically, this standard was used primarily for the assessment of explosive safety. The standard was later revised to add additional IM tests as called out by the Joint Service Requirement for Insensitive Munitions (JSRIM). This revision makes a distinction between explosive safety tests and the IM tests as contained in the JSRIM even though it is recognized that these tests may often be contained in the same system hazard assessment test program.
4. Three sets of tests are commonly used to assess munitions with respect to hazards: IM tests as contained in this standard; hazard classification tests used to classify munitions for transportation and storage purposes; and system specific tests used to assess the role of munition response on system vulnerability. In order to best utilize limited resources and avoid test redundancy, IM test plans should be tailored, to the maximum extent possible within the guidelines contained in this standard, so that all three sets of tests can be addressed in one coordinated test program with the minimum number of samples. Therefore, it is recommended that test plans be coordinated with the appropriate service hazard classifier and the Department of Defense Explosives Safety Board (DDESB), 2461 Eisenhower Avenue, Alexandria, VA 22331-0600, when a DOD hazard classification for an item is to be obtained in accordance with TB 700-2<sup>1</sup>.
5. Additional or modified hazard testing may be required to fully assess the tactical and logistical vulnerability of the given weapon system against the probable threats to which the system may be subjected. Accordingly, project managers and munition developers will conduct a threat hazard assessment to determine the adequacy of IM tests as specified in this standard. If the assessment indicates that different environmental hazards or threats to the weapon system pose additional vulnerability problems, then the IM tests will be tailored to meet those requirements and a rationale to support the assessment will be provided.
6. Program managers are responsible for planning and executing a hazard assessment test program. The hazard assessment test program includes a test plan based on a

<sup>1</sup> TB 700-2, "Department of Defense Ammunition and Explosives Hazard Classification Procedures," is also known as NAVSEAINST 8020.8, TO 11A-1-47, and DLAR 8220.1.

**Enclosure 19**  
**MIL-STD-2105B, Hazard Assessment Test for Non-Nuclear Munitions**

MIL-STD-2105B    9999911 0472802 736

**MIL-STD-2105B**

**3.11 Reaction types.**

- a. **Type I (Detonation Reaction).** The most violent type of explosive event. A supersonic decomposition reaction propagates through the energetic material to produce an intense shock in the surrounding medium, air or water for example, and very rapid plastic deformation of metallic cases, followed by extensive fragmentation. All energetic material will be consumed. The effects will include large ground craters for munitions on or close to the ground, holing/plastic flow damage/fragmentation of adjacent metal plates, and blast overpressure damage to nearby structures.
- b. **Type II (Partial Detonation Reaction).** The second most violent type of explosive event. Some, but not all of the energetic material reacts as in a detonation. An intense shock is formed; some of the case is broken into small fragments; a ground crater can be produced, adjacent metal plates can be damaged as in a detonation, and there will be blast overpressure damage to nearby structures. A partial detonation can also produce large case fragments as in a violent pressure rupture (brittle fracture). The amount of damage, relative to a full detonation, depends on the portion of material that detonates.
- c. **Type III (Explosion Reaction).** The third most violent type of explosive event. Ignition and rapid burning of the confined energetic material builds up high local pressures leading to violent pressure rupturing of the confining structure. Metal cases are fragmented (brittle fracture) into large pieces that are often thrown long distances. Unreacted and/or burning energetic material is also thrown about. Fire and smoke hazards will exist. Air shocks are produced that can cause damage to nearby structures. The blast and high velocity fragments can cause minor ground craters and damage (breakup, tearing, gouging) to adjacent metal plates. Blast pressures are lower than for a detonation.
- d. **Type IV (Deflagration Reaction).** The fourth most violent type of explosive event. Ignition and burning of the confined energetic materials leads to nonviolent pressure release as a result of a low strength case or venting through case closures (loading port/fuze wells, etc.). The case might rupture but does not fragment; closure covers might be expelled, and unburned or burning energetic material might be thrown about and spread the fire. Propulsion might launch an unsecured test item, causing an additional hazard. No blast or significant fragmentation damage to the surroundings; only heat and smoke damage from the burning energetic material.
- e. **Type V (Burning Reaction).** The least violent type of explosive event. The energetic material ignites and burns, non-propulsively. The case may open, melt or weaken sufficiently to rupture nonviolently, allowing mild release of combustion gases. Debris stays mainly within the area of the fire. This debris is not expected to cause fatal wounds to personnel or be a hazardous fragment beyond 15 m (49 ft).

**Enclosure 19**  
**MIL-STD-2105B, Hazard Assessment Test for Non-Nuclear Munitions**

MIL-STD-2105B

■ 9999911 0472803 672 ■

**MIL-STD-2105B**

**3.12 Service review organization.** The various organizations within the services which are responsible for the assessment of explosive safety and IM characteristics (see 6.5).

**3.13 Sympathetic detonation.** The detonation of a munition or an explosive charge induced by the detonation of another like munition or explosive charge.

**3.14 Threat hazard assessment (THA).** An evaluation of the munition life cycle environmental profile to determine the threats and hazards to which the munition may be exposed. The assessment includes threats posed by friendly munitions, enemy munitions, accidents, handling, etc. The assessment shall be based on analytical or empirical data to the extent possible.

**3.15 Weapon system.** A munition and those components and equipment required for its operation and support.

**Enclosure 20**  
**LBM Work Record for Water Leak at Building 705**

N62477-99-D-3521

**CONTRACT SUPPORT REQUEST**

SER. NO. 3521- 00297 DATE: 11-4-02 TIME: 0735

POINT OF CONTACT: Dave Stewart COST CENTER: 09

PHONE#PAGER# 4818 CHARGE NO. 70965AR

FFP LINE ITEM NO. \_\_\_\_\_ 1AA \_\_\_\_\_ 1AD \_\_\_\_\_ 1AC (OTHER)

DATE/TIME SERVICE REQUIRED: NLT COB TODAY \_\_\_\_\_ 4 HR RESPONSE REQ'D \_\_\_\_\_

(CHOOSE ONE) DATE AND TIME 11-4-02 EMERGENCY: \_\_\_\_\_

WORK DESCRIPTION: Water leaks

LOCATION: 705 (BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS: Permits from I.Q. remain in force

ICN NUMBER(IF APPLICABLE) \_\_\_\_\_ MSDS# \_\_\_\_\_

SAFETY PERMIT REQUIRED? ☒ (YES) \_\_\_\_\_ (NO)

WORK COVERED BY SOP? ☒ (YES) \_\_\_\_\_ (NO)

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE \_\_\_\_\_ TIME COMPLETED \_\_\_\_\_  
TIME READY FO NEXT TASK: \_\_\_\_\_ COMPLETION DATE: \_\_\_\_\_  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: \_\_\_\_\_  
PERSONNEL ASSIGNED TO THIS TASK: \_\_\_\_\_

21-99-3521

**Enclosure 20**  
**LBM Work Record for Water Leak at Building 705**

\*\*\*\*\* COMM. JOURNAL \*\*\*\*\* DATE NOV-04-2002 TIME 06:41 \*\*\*\*\*

MODE = MEMORY TRANSMISSION

START=NOV-04 06:36

END=NOV-04 06:41

FILE NO. =767

STN NO.	COMM.	ONE-TOUCH/ ABRD NO.	STATION NAME/EMAIL ADDRESS/TELEPHONE NO.	PAGES	DURATION
001	OK	<01>	LBM	001/001	00:00:51

-CONTRACTS BRANCH-

\*\*\*\*\* NSWC IND \*\*\*\*\* 301 744 4949 \*\*\*\*\*

**CONTRACT SUPPORT REQUEST**

SER. NO. 3521- 0097 DATE: 11-4-02 TIME: 0735

POINT OF CONTACT: Dave Stewart COST CENTER: 09

PHONE/PAGER# 4818 CHARGE NO. 70965AR

FFP LINE ITEM NO. \_\_\_\_\_ 1AA \_\_\_\_\_ 1AD \_\_\_\_\_ 1AC \_\_\_\_\_ (OTHER)

DATE/TIME SERVICE REQUIRED: NLT COB TODAY \_\_\_\_\_ HR RESPONSE REQ'D \_\_\_\_\_

(CHOOSE ONE) DATE AND TIME 11-4-02 EMERGENCY: \_\_\_\_\_

WORK DESCRIPTION: Water leaks

LOCATION: 705

(BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)  
SPECIAL INSTRUCTIONS: Permits from I.G. remain in force

ICN NUMBER (IF APPLICABLE) \_\_\_\_\_ MSDS# \_\_\_\_\_

SAFETY PERMIT REQUIRED? ☒ (YES) \_\_\_\_\_ (NO) \_\_\_\_\_  
WORK COVERED BY SOP? ☒ (YES) \_\_\_\_\_ (NO) \_\_\_\_\_

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE \_\_\_\_\_ TIME COMPLETED \_\_\_\_\_  
TIME READY FOR NEXT TASK \_\_\_\_\_ COMPLETION DATE: \_\_\_\_\_  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: \_\_\_\_\_  
PERSONNEL ASSIGNED TO THIS TASK: \_\_\_\_\_

21-99-3521

**Enclosure 20**  
**LBM Work Record for Water Leak at Building 705**

NOV-04-2002 08:40

CONTRACT SUPPORT REQUEST

301 744 4949

P. 01/01

SER. NO. 3521- 0297 DATE: 11-4-02 TIME: 0735

POINT OF CONTACT: Dave Stewart COST CENTER: 09

PHONE/PAGER# 4818 CHARGE NO. 70965AR

FFP LINE ITEM NO. \_\_\_\_\_ 1AA \_\_\_\_\_ 1AD \_\_\_\_\_ 1AC (OTHER)

DATE/TIME SERVICE REQUIRED: NLT COB TODAY \_\_\_\_\_ 4 HR RESPONSE REQ'D

(CHOOSE ONE) DATE AND TIME 11-4-02 EMERGENCY: \_\_\_\_\_

WORK DESCRIPTION: Water leaks

LOCATION: 705 (BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS: Permits from I.Q. remain in force

ICN NUMBER (IF APPLICABLE) \_\_\_\_\_ MSDS# \_\_\_\_\_

SAFETY PERMIT REQUIRED? ☒ (YES) \_\_\_\_\_ (NO) \_\_\_\_\_  
WORK COVERED BY SOP? ☒ (YES) \_\_\_\_\_ (NO) \_\_\_\_\_

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_

COMMENTS: \_\_\_\_\_

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE 07:00 TIME COMPLETED 10:15

TIME READY FOR NEXT TASK: \_\_\_\_\_ COMPLETION DATE: 11-8-02

TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: 33.25

PERSONNEL ASSIGNED TO THIS TASK: \_\_\_\_\_

11-4-02

21-99-3521

Slaughter 8  
Adams 8 24  
Brooke 8

Slaughter 3.25 9.75  
Adams 3.25  
William 3.25

TOTAL P. 01



**Enclosure 21 – NDW-IHDIVNAVSURFWARCEN 4035/30, Decontamination Green Tag for 4" Projectile issued on 4 November 2002.**

EXPLOSIVES DECONTAMINATION TAG  
Indian Head Division, Naval Surface Warfare Center

ITEM (Identify)  
*4" Projectile (empty)*

This item has been thoroughly decontaminated and is SAFE for performing any maintenance, repair or modification work required.

DATE DECONTAMINATED  
*11/04/02*

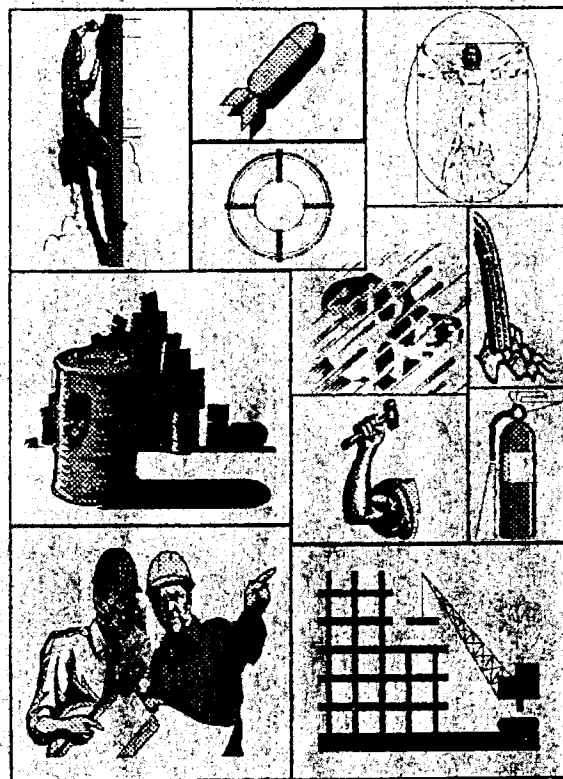
SUPERVISOR (Signature)	CODE
SAFETY INSPECTOR (Signature) <i>Frank James</i>	CODE <i>09203</i>



Enclosure 22  
EM 385-1, U.S. Army Cover Page of Corps of Engineers Safety and Health  
Requirements Manual

EM 385-1-1  
3 SEPTEMBER 1996

US ARMY CORPS OF ENGINEERS  
**SAFETY AND HEALTH  
REQUIREMENTS MANUAL**



**Enclosure 24**  
**LBM Work Order for 12 inch Item Pickup on 7 Nov 2002**

N62477-99-D-3521

**CONTRACT SUPPORT REQUEST**

SER. NO. 3521- 0335 DATE: 11-6-02 TIME: 1430

POINT OF CONTACT: Frank James COST CENTER: 04

PHONE#/PAGER# \_\_\_\_\_ CHARGE NO. 70964C4

FFP LINE ITEM NO. \_\_\_\_\_ 1AA \_\_\_\_\_ ☒ 1AD \_\_\_\_\_ 1AC \_\_\_\_\_ (OTHER) \_\_\_\_\_

DATE/TIME SERVICE REQUIRED: NLT COB TODAY 1 HR RESPONSE REQ'D \_\_\_\_\_

(CHOOSE ONE) DATE AND TIME 11-7-02 EMERGENCY: \_\_\_\_\_

WORK DESCRIPTION: P/U & deliver 1 projectile (the one at Dashiell Marina)

LOCATION: Scrapyard to 1134  
(BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS: Per Capt. Seidband

ICN NUMBER(IF APPLICABLE) \_\_\_\_\_ MSDS# \_\_\_\_\_

SAFETY PERMIT REQUIRED? \_\_\_\_\_ (YES) ☒ (NO)  
WORK COVERED BY SOP? \_\_\_\_\_ (YES) ☒ (NO)

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE \_\_\_\_\_ TIME COMPLETED \_\_\_\_\_  
TIME READY FO NEXT TASK: \_\_\_\_\_ COMPLETION DATE: \_\_\_\_\_  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: \_\_\_\_\_  
PERSONNEL ASSIGNED TO THIS TASK: \_\_\_\_\_

21-99-3521

**Enclosure 24**  
**LBM Work Order for 12 inch Item Pickup on 7 Nov 2002**

\*\*\*\*\* -COMM. JOURNAL- \*\*\*\*\* DATE NOV-06-2002 \*\*\*\*\* TIME 15:35 \*\*\*\*\*

MODE = MEMORY TRANSMISSION

START=NOV-06 15:34

END=NOV-06 15:35

FILE NO.=815

STN NO.	COMM.	ONE-TOUCH/ ABBR NO.	STATION NAME/EMAIL ADDRESS/TELEPHONE NO.	PAGES	DURATION
001	OK	<01>	LBM	001/001	00:00:53

-CONTRACTS BRANCH

\*\*\*\*\* -NSJC 1HD \*\*\*\*\* 301 744 4949 \*\*\*\*\*

**CONTRACT SUPPORT REQUEST**

SER. NO. 3521- 0335 DATE: 11-6-02 TIME: 1430

POINT OF CONTACT: Frank James COST CENTER: 04

PHONE/PAGER# \_\_\_\_\_ CHARGE NO. 70964C4

FFP LINE ITEM NO. \_\_\_\_\_ 1AA \_\_\_\_\_ AD \_\_\_\_\_ 1AC \_\_\_\_\_ (OTHER)

DATE/TIME SERVICE REQUIRED: NOT COB TODAY 1 HR RESPONSE REQ'D \_\_\_\_\_

(CHOOSE ONE) DATE AND TIME 11-7-02 EMERGENCY: \_\_\_\_\_

WORK DESCRIPTION: P/U + deliver 1 projectile (the one at Dashiell Marina)

LOCATION: Scrapyard to 1134  
(BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS: Per Capt. Seidband

ICN NUMBER (IF APPLICABLE) \_\_\_\_\_ MSDS# \_\_\_\_\_

SAFETY PERMIT REQUIRED? \_\_\_\_\_ (YES) / \_\_\_\_\_ (NO)  
WORK COVERED BY SOP? \_\_\_\_\_ (YES) / \_\_\_\_\_ (NO)

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE \_\_\_\_\_ TIME COMPLETED \_\_\_\_\_  
TIME READY FOR NEXT TASK: \_\_\_\_\_ COMPLETION DATE: \_\_\_\_\_  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: \_\_\_\_\_  
PERSONNEL ASSIGNED TO THIS TASK: \_\_\_\_\_

21-69-3521

**Enclosure 24**  
**LBM Work Order for 12 inch Item Pickup on 7 Nov 2002**

NOV-06-2002 15:34

CONTRACTS BRANCH  
11/06/02 15:34

001 044 4949 P.01/01

**CONTRACT SUPPORT REQUEST**

SER. NO. 3521- 0335 DATE: 11-6-02 TIME: 1430

POINT OF CONTACT: Frank James COST CENTER: 04

PHONE/PAGER# \_\_\_\_\_ CHARGE NO. 7096404

FFP LINE ITEM NO. \_\_\_\_\_ 1AA \_\_\_\_\_ 1AD \_\_\_\_\_ 1AC \_\_\_\_\_ (OTHER)

DATE/TIME SERVICE REQUIRED: W/T COS TODAY 1 HR RESPONSE REQ'D \_\_\_\_\_

(CHOOSE ONE) DATE AND TIME 11-7-02 EMERGENCY: \_\_\_\_\_

WORK DESCRIPTION: P/U & deliver 1 projectile (the one at Dashiell Marina)

LOCATION: Scrapyard to 1134  
(BLDG OR EXCAVATION CLOSEST TO BLDG OR STREET)

SPECIAL INSTRUCTIONS: Per Capt. Seidband

ICN NUMBER (IF APPLICABLE) \_\_\_\_\_ MSDS# \_\_\_\_\_

SAFETY PERMIT REQUIRED? \_\_\_\_\_ (YES) / \_\_\_\_\_ (NO)  
WORK COVERED BY SOP? \_\_\_\_\_ (YES) \_\_\_\_\_ (NO)

(TO BE COMPLETED BY CUSTOMER)

SERVICE RECEIVED BY: \_\_\_\_\_ DATE \_\_\_\_\_ TIME \_\_\_\_\_  
COMMENTS: \_\_\_\_\_

(TO BE COMPLETED BY CONTRACTOR)

TIME ARRIVED ON SITE 8:30 TIME COMPLETED 9:15  
TIME READY FOR NEXT TASK: \_\_\_\_\_ COMPLETION DATE: 11-7-02  
TOTAL NUMBER OF HOURS CHARGED TO THIS TASK: 1.50  
PERSONNEL ASSIGNED TO THIS TASK: \_\_\_\_\_

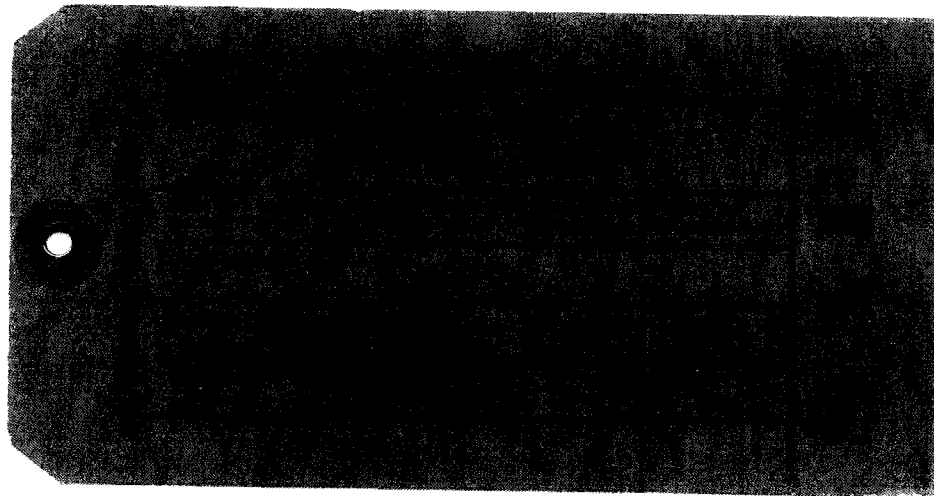
21-99-3521

*Smalls  
Somerville*



TOTAL P.01

Enclosure 25  
Decontamination Tag NDW-IHDIVNAVSURFWARCEN 4035/30 from Pages  
of Safety Manual



Enclosure 26.  
IHDNSWC Scrap Yard Photographs



Enclosure 26.  
IHDNSWC Scrap Yard Photographs





Enclosure 26.  
IHDNSWC Scrap Yard Photographs



**Enclosure 27**  
**Cover of Approved Work Plan**



OHM Remediation  
Services Corp.

**FINAL  
WORK PLAN  
REMOVAL ACTION FOR SITE 41 - SCRAP YARD  
INDIAN HEAD DIVISION - NAVAL SURFACE WARFARE CENTER  
INDIAN HEAD, MARYLAND**

**CONTRACT NO. N62470-97-D-5000  
TASK ORDER 077**

Prepared for:

DEPARTMENT OF THE NAVY  
Engineering Field Activity - Chesapeake  
1314 Harwood Street S.E.  
Washington Navy Yard, DC 20374-5018

Prepared by:

OHM Remediation Services Corporation  
2790 Mosside Boulevard  
Monroeville, Pennsylvania 15146-2792

Reviewed by:

*Daniel W. Pringle*  
Daniel W. Pringle  
Project Manager

*Joseph W. Colella for*  
Roland S. Moreau, PE  
Program Manager

Project No. 831866

November 26, 2002

042/042B  
m

**Enclosure 28.**  
**Designation Letters**



DEPARTMENT OF THE NAVY  
INDIAN HEAD DIVISION  
NAVAL SURFACE WARFARE CENTER  
101 STRAUSS AVE  
INDIAN HEAD MD 20640-5035

8020  
Ser 041A6/242

29 APR 1997

From: Commander, Indian Head Division, Naval Surface Warfare Center  
To: Chief, Defense Reutilization and Marketing Office  
P.O. Box 388, Ft. Meade, MD 20755-0388

Subj: AMMUNITION DEMIL AND DISPOSAL OPERATIONS

Ref: (a) PHONCON IHDIVNAVSURFWARCEN (Code 041A6)K. Bonnin/  
DRMO Sue Arteche of 16 Apr 97

1. As requested in reference (a), the following personnel are designated as safety inspectors and certification officers for munition list items and equipment declared inert by this Activity.

2. Members of the Safety Department, Code 04, will issue a Form NDW-NAVORDSTA 4035/30, "Explosives Decontamination Tag-SAFE," declaring the item(s) as being inert and containing nothing of a dangerous nature. The 4035/30 will bear the signature of one of the following personnel:

Peter C. Henderson

Frank James

*use another  
form: see 4160.* Michael Olup

Roderick Spruill

Thomas Woodland

Silas Williamson

*Peter C. Henderson*  
*Frank James*  
*Michael Olup*  
*Roderick E. Spruill*  
*Thomas Woodland*  
*Silas Williamson*

3. Members of the Property Disposal Office, Code 112B, who will be the certifying official whose signature will appear on the DoD Form 1348-1 excess document, are as follows:

John W. Harley

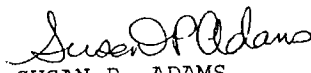
Robert G. Steves

*John W. Harley*  
(Employee is on extended  
Sick Leave he will be certified  
separately)

**Enclosure 28.**  
**Designation Letters**

Subj: AMMUNITION DEMIL AND DISPOSAL OPERATIONS

4. The NDW-NAVORDSTA Form 4035/30 will remain on file at the Property Disposal Office, Building 266, at the Naval Surface Warfare Center, Indian Head, Maryland. The original and three copies of the 1348-1 will accompany the item of excess to the Defense Reutilization and Marketing Office at Ft. Meade, MD.
5. The above personnel are authorized for the period of Fiscal Year 97.
6. If there are any questions or comments, please contact Karen Bonnin, Code 041A6 on DSN 354-4383 or Commercial (301) 743-4383.

  
SUSAN P. ADAMS  
By direction

**Enclosure 28.**  
**Designation Letters**



DEPARTMENT OF THE NAVY  
INDIAN HEAD DIVISION  
NAVAL SURFACE WARFARE CENTER  
101 STRAUSS AVE  
INDIAN HEAD, MD 20640-5035

8020  
Ser 2150F/6

**17 FEB 1998**

From: Commander, Indian Head Division, Naval Surface Warfare Center  
To: Chief, Defense Reutilization and Marketing Office, P.O. Box 388,  
Ft. Meade, MD 20755-0388

Subj: AMMUNITION DEMIL. AND DISPOSAL OPERATIONS

Ref: (a) OP-5  
(b) DOD4160.21 M-1  
(c) TWO-010-AC-ORD-010

1. As required by references (a), (b), and (c), we are providing the following list of additional personnel authorized by this Activity to certify material as inert for the purpose of scrap metal disposal.

Alvin Brooker

Alvin T. Brooker

Kevin Simmons

Kevin D. Simmons

Vernon Hemsley

Vernon Hemsley

Gregory Bowman

Gregory L. Bowman

2. The above personnel will only certify material as inert after processing in the Solid Waste Recycler (SWR), decontamination furnace located at Building 1770, IHDIVNAVSURFWARCEN. The above personnel will provide inert certification on a DD Form 1348 and on a NDW-NAVORDSFA Form 4053/30 (Green Tag) upon transfer of the material to the Property Disposal Office at IHDIVNAVSURFWARCEN. The original and three copies of the DD Form 1348 will then be forwarded to the Defense Reutilization and Marketing Office at Ft. Meade, MD upon disposal of the scrap.

3. The above personnel are trained and certified to operate the Building 1770 decontamination furnace and to certify material as inert per IHDIVNAVSURFWARCEN Standard Operating Procedure 198-235. This authorization list will be updated as personnel changes are made at this facility.

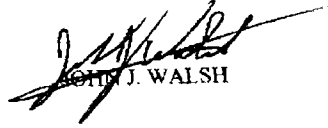
**Enclosure 28.**  
**Designation Letters**

Mar-23-98 10:27

P. 10

Subj: AMMUNITION DEMIL AND DISPOSAL OPERATIONS

4. Please address any questions or comments regarding this letter to Al Brooker, Code 2150F, on DSN 354-4858 or Commercial (301)743-4858, extension 1887.

  
JOHN J. WALSH

Enclosure 29  
Photographs of Steve Jackson's Clothing/Equipment



Energetic Solutions for Today's  
Analytical Needs.

Enclosure 29  
Photographs of Steve Jackson's Clothing/Equipment

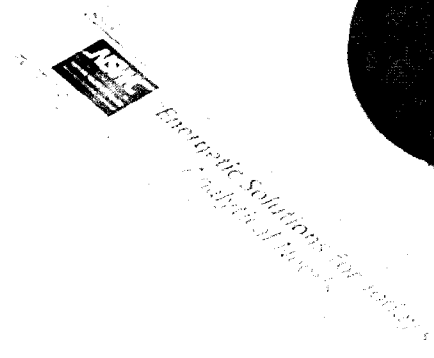
**JSMC**  
Energetic Solutions for Today's  
Analytical Needs.



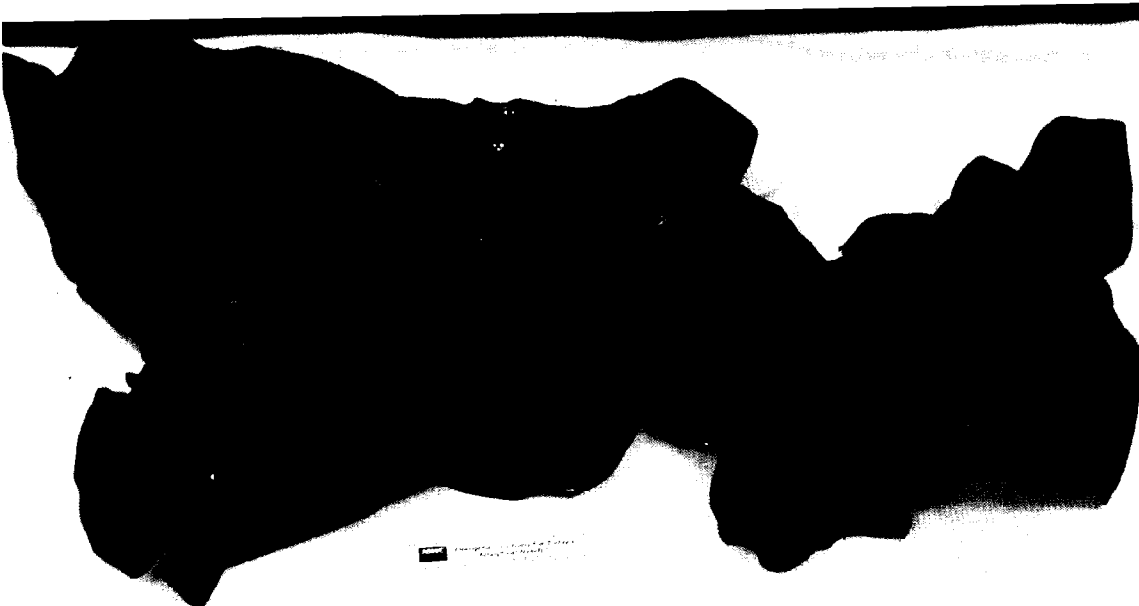
**JSMC**  
Energetic Solutions for Today's  
Analytical Needs.



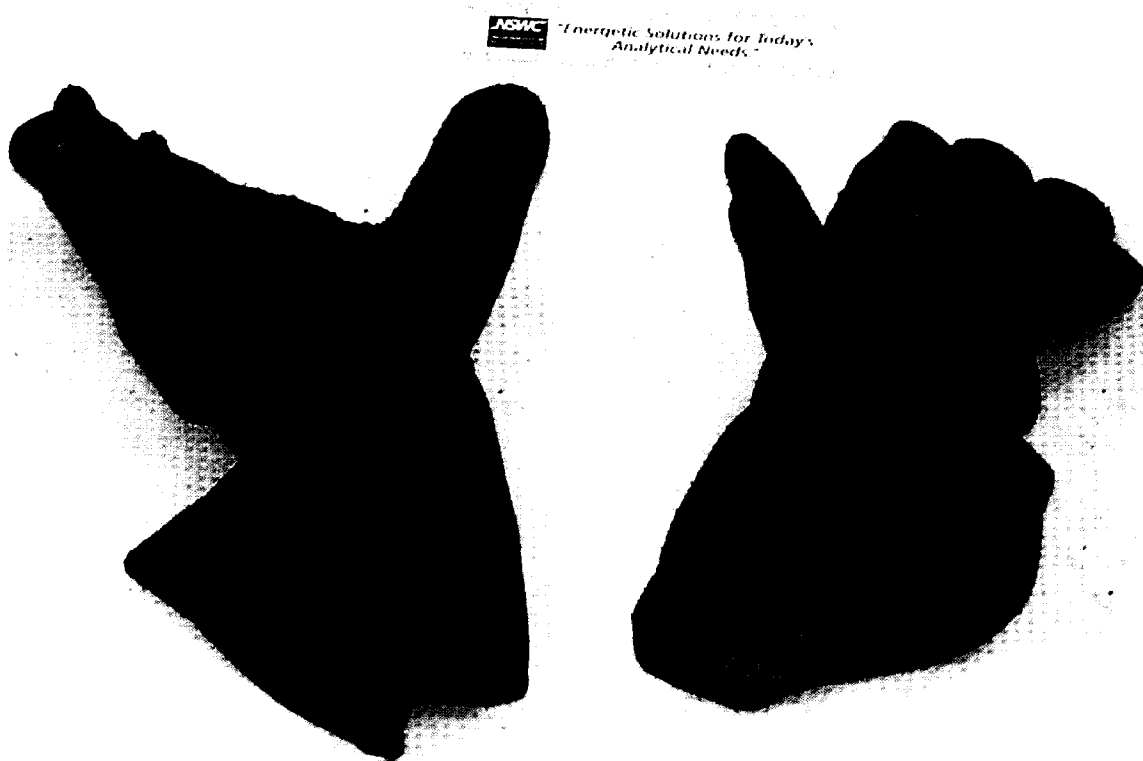
Enclosure 29  
Photographs of Steve Jackson's Clothing/Equipment



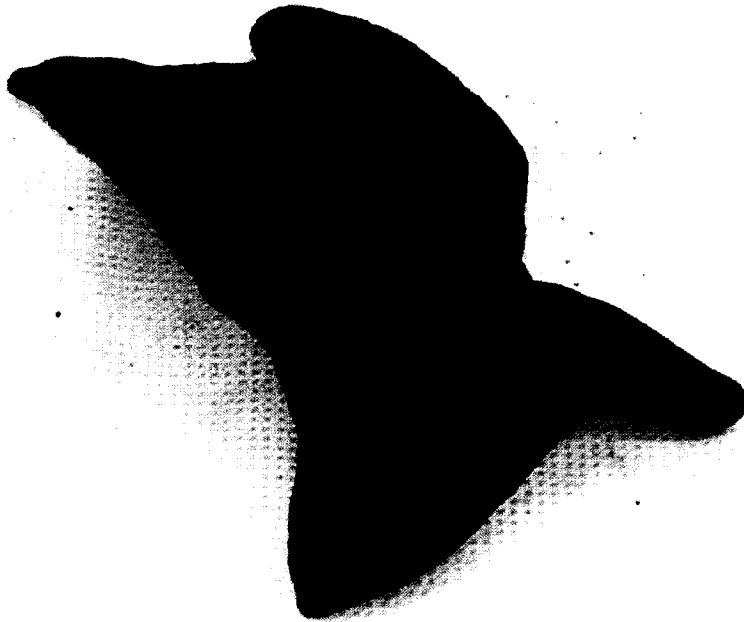
Enclosure 29  
Photographs of Steve Jackson's Clothing/Equipment



Enclosure 29  
Photographs of Steve Jackson's Clothing/Equipment



**Enclosure 29**  
**Photographs of Steve Jackson's Clothing/Equipment**

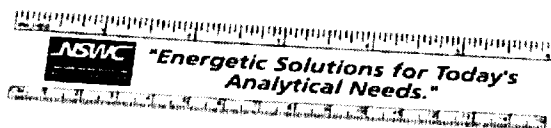


**JSWC** "Energetic Solutions for Today's  
Analytical Needs."

Enclosure 29  
Photographs of Steve Jackson's Clothing/Equipment



Enclosure 29  
Photographs of Steve Jackson's Clothing/Equipment



**Enclosure 30**  
**OPNAVINST 5090.1B CH-2**

OPNAVINST 5090.1B CH-2  
9 September 1999

- A) **14-3.2 Composting.** A controlled process for managing the degradation of plant and other organic wastes to produce a useful product that can be used as mulch or soil conditioner.

**14-3.3 Contained Disposal.** Landfilling or incineration of solid waste in a permitted facility. This is the least desirable solid waste option and ranks at the bottom of the priority list for integrated solid waste management.

**14-3.4 Direct Sales.** Competitively selling recyclable materials to a vendor by the managing activity without utilizing the Defense Reutilization and Marketing Office (DRMO).

- A) **14-3.5 Diversion Rate.** The rate at which non-hazardous solid waste is diverted from entering a disposal facility. Disposal facilities include landfills (both solid waste and inert) and incinerators. Composting, mulching, recycling, reuse, and donation are generally accepted waste diversion methods. The diversion rate equals:

$$\frac{R}{R + L} * 100 = \text{diversion rate (percent)}$$

R = amount (in tons) of non-hazardous solid waste (including recycled construction and demolition debris) that is composted, mulched, recycled, reused, donated, or otherwise diverted from a disposal facility.

L = amount (in tons) of solid waste (including landfilled construction and demolition debris) transferred to a disposal facility.

- R) **14-3.6 Energy Recovery.** Steam or electrical energy produced from solid waste used as a fuel in a waste to energy plant. All incineration, including energy recovery, is counted as disposal in diversion rate calculation.

**14-3.7 Excluded Materials.** Materials that may not be sold through a Qualified Recycling Program (QRP). Proceeds from the sale of

excluded materials SHALL NOT be returned to a QRP. Per U.S.C. 2577 and reference (c), excluded items include, but are not limited to: government-furnished material; precious metal bearing scrap; hazardous waste (including household hazardous waste); ozone depleting substances; electrical components; unopened containers of solvents, paints, or oil; fuels; material that can be sold (as is) as a usable item; repairable items that may be used again for their original purposes or functions, e.g., used vehicles, vehicle or machine parts, etc.; ships, aircraft, weapons, and other material required to be demilitarized or mutilated, and scrap resulting from demilitarization; all Munitions List Items (MLI) and Strategic List Items (SLI) as defined in DOD 4160.21-M-1 of October 1991 (NOTAL), except firing range expended brass and mixed metals gleaned from firing range cleanup; scrap generated from Working Capital Fund (WCF) activities; usable personal property purchased by WCF activities; property purchased with commissary surcharge funds; automatic data processing equipment owned by the General Services Administration; property purchased for the Military Assistance program or purchased with Foreign Military Sales Administration funds; Coast Guard property; property owned by non-appropriated fund activities; lost, abandoned, or unclaimed privately owned personal property; property owned by a country or international organization; bones, fats, and meat trimmings generated by a commissary.

**14-3.8 Facility.** For the purposes of this chapter, a facility is a contiguous piece of land with structures, other appurtenances, and improvements under common ownership or control, fenceline to fenceline.

**14-3.9 Managing Activity.** An administrative element assigned to manage a recycling program (including personnel, funds, and equipment).

**Office Waste.** Solid wastes generated (A) every day affairs of government workers in government buildings and rooms. Excludes

Enclosure 31  
Photographs of Fragments Sent to Hospital





**Enclosure 31**  
**Photographs of Fragments Sent to Hospital**



**Washington  
Hospital Center**

December 16, 2002

Cynthia S. Guill  
Office of Counsel  
Department of the Navy  
Engineering Field Activity Chesapeake  
1314 Harwood Street, SE  
Washington, DC 20374-5018

RE: Steven Jackson

Dear Ms. Guill:

Thank you for speaking with me today about your investigation into the circumstances of Mr. Jackson's injury on November 21, 2002.

As I mentioned when we spoke, two metallic fragments, reportedly from a piece of detonated military ordnance, were transported to our facility with Mr. Jackson on November 21. I have been advised that these fragments were disposed of approximately a week after Mr. Jackson's admission to our facility. This information was earlier provided to a naval investigator on December 2 in a phone conversation with a nursing manager in our trauma unit. A digital photograph of the fragments, taken following Mr. Jackson's arrival, was transmitted to the investigator via e-mail (carisae@ih.navy.mil) that same day.

On behalf of Washington Hospital Center I regret any difficulties this circumstance may present to your ongoing investigation of this incident.

Please feel free to contact me at 202-877-2269 should you require additional information or have further questions in this regard.

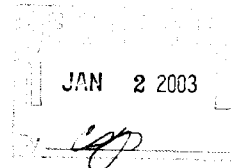
Sincerely,

A handwritten signature in black ink, appearing to read "Kevin McGraw", written over a horizontal line.

Kevin McGraw  
Clinical Risk Manager

*MedStar Health*

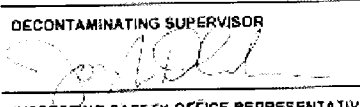

110 Irving Street, NW, Washington, DC 20010-2975  
[www.WHCenter.org](http://www.WHCenter.org)



**Enclosure 32**  
**Example of DD Form 2271**

**DECONTAMINATION TAG**

THIS TAG IS VOID IF ALTERED, MODIFIED IN ANY WAY, OR ATTACHMENT SEAL IS BROKEN.  
REMOVE TAG AND KEEP FOR YOUR RECORD BEFORE USING ITEM.  
FILL OUT STUB AND SEND TO INSTALLATION/ACTIVITY SAFETY OFFICE.  
COMPLETE INSTRUCTIONS FOR THE USE OF THIS FORM ARE LOCATED  
IN EACH DOD COMPONENT REGULATION.

NAME OF INSTALLATION/ACTIVITY NAVAL SURFACE WARFARE CENTER Indian Head MD 20540	SERIAL NO. 01 (1593)	REPLACES TAG SERIAL NO. Original Tag
DEGREE OF DECONTAMINATION (Letter(s) not crossed out indicate degree)  *****0		DATE DECONTAMINATED (YYMMDD) Not applicable
DESCRIPTION OF ITEM  Building 1593 is a deluge valve house which contains the sprinkler system that provided fire protection to the loading platform directly over and to the front and back sides of the building. The loading platform was associated with UDMH operations in the area. Building 1593 is presumed not to be contaminated and there is no history of explosives associated with the building.		
ITEM USED FOR Fire protection system shelter		NAME OF CONTAMINANT Not applicable
ITEM SERIAL/MODEL NO. BUILDING/AREA  Building 1593		ITEM TAGGED AT Yap of Reservation Indian Head Division Grid T-23
REASON FOR DECONTAMINATION <input type="checkbox"/> REPAIR IN PLACE <input type="checkbox"/> TRANSFER TO _____ FOR _____ <input type="checkbox"/> OTHER (explain) Not applicable		
DECONTAMINATION PROCEDURE USED <input type="checkbox"/> HOT WATER <input type="checkbox"/> FLAME: TEMP: _____ <input type="checkbox"/> STEAM <input type="checkbox"/> OVEN: HOURS: _____ <input type="checkbox"/> SOLVENT: TYPE: Not applicable		STANDARD OPERATING PROCEDURE NO. Not applicable
SPECIFIC INSTRUCTIONS/ADDITIONAL INFORMATION		
SIGNATURES		
DECONTAMINATING SUPERVISOR 		DATE (YYMMDD) 19 Oct 2001
INSPECTING SAFETY OFFICE REPRESENTATIVE 		DATE (YYMMDD) 01/11/03
NAME OF INSTALLATION/ACTIVITY NAVAL SURFACE WARFARE CENTER INDIAN HEAD DIVISION		SERIAL NO.
NAME OF PERSON REMOVING TAG (Last, First, MI)		DATE (YYMMDD)
REASON TAG REMOVED <input type="checkbox"/> ITEM BEING USED <input type="checkbox"/> TAG REPLACED BY TAG NO. _____ <input type="checkbox"/> OTHER (explain)		
DD Form 2271 82 NOV  REPLACES DA FORM 3803, WHICH MAY BE USED UNTIL SUPPLY EXHAUSTED.		

**Enclosure 33**  
**DFARS 252.223-7002 Safety Precautions for Ammunition and Explosives**

01/15/03 WED 11:08 FAX

001

Page 1 of 4

DFARS 252.220 thru 252.226

DFARS 252.223-7002 Safety Precautions for Ammunition and Explosives.

As prescribed in 223.370-5, use the following clause:

**SAFETY PRECAUTIONS FOR AMMUNITION AND EXPLOSIVES (MAY 1994)**

(a) *Definition.* "Ammunition and explosives," as used in this clause-

(1) Means liquid and solid propellants and explosives, pyrotechnics, incendiaries and smokes in the following forms:

- (i) Bulk,
- (ii) Ammunition;
- (iii) Rockets;
- (iv) Missiles;
- (v) Warheads;
- (vi) Devices; and
- (vii) Components of (i) through (vi), except for wholly inert items.

(2) This definition does not include the following, unless the Contractor is using or incorporating these materials for initiation, propulsion, or detonation as an integral or component part of an explosive, an ammunition or explosive end item, or of a weapon system-

- (i) Inert components containing no explosives, propellants, or pyrotechnics;
- (ii) Flammable liquids;
- (iii) Acids;
- (iv) Oxidizers;
- (v) Powdered metals; or
- (vi) Other materials having fire or explosive characteristics.

(b) *Safety requirements.*

(1) The Contractor shall comply with the requirements of the DoD Contractors' Safety Manual for Ammunition and Explosives, DoD 4145.26-M, hereafter

[http://farsite.hill.af.mil/rcghtml/regs/far2afmcfars/fardfars/dfars/dfars252\\_220.htm](http://farsite.hill.af.mil/rcghtml/regs/far2afmcfars/fardfars/dfars/dfars252_220.htm)

1/15/2003

**Enclosure 33**  
**DFARS 252.223-7002 Safety Precautions for Ammunition and Explosives**

01/15/03 WED 11:09 FAX

002

Page 2 of 4

DFARS 252.220 thru 252.226

referred to as "the manual," in effect on the date of the solicitation for this contract. The Contractor shall also comply with any other additional requirements included in the schedule of this contract.

(2) The Contractor shall allow the Government access to the Contractor's facilities, personnel, and safety program documentation. The Contractor shall allow authorized Government representatives to evaluate safety programs, implementation, and facilities.

*(c) Noncompliance with the manual.*

(1) If the Contracting Officer notifies the Contractor of any noncompliance with the manual or schedule provisions, the Contractor shall take immediate steps to correct the noncompliance. The Contractor is not entitled to reimbursement of costs incurred to correct noncompliances unless such reimbursement is specified elsewhere in the contract.

(2) The Contractor has 30 days from the date of notification by the Contracting Officer to correct the noncompliance and inform the Contracting Officer of the actions taken. The Contracting Officer may direct a different time period for the correction of noncompliances.

(3) If the Contractor refuses or fails to correct noncompliances within the time period specified by the Contracting Officer, the Government has the right to direct the Contractor to cease performance on all or part of this contract. The Contractor shall not resume performance until the Contracting Officer is satisfied that the corrective action was effective and the Contracting Officer so informs the Contractor.

(4) The Contracting Officer may remove Government personnel at any time the Contractor is in noncompliance with any safety requirement of this clause.

(5) If the direction to cease work or the removal of Government personnel results in increased costs to the Contractor, the Contractor shall not be entitled to an adjustment in the contract price or a change in the delivery or performance schedule unless the Contracting Officer later determines that the Contractor had in fact complied with the manual or schedule provisions. If the Contractor is entitled to an equitable adjustment, it shall be made in accordance with the Changes clause of this contract.

*(d) Mishaps.* If a mishap involving ammunition or explosives occurs, the Contractor shall-

(1) Notify the Contracting Officer immediately;

(2) Conduct an investigation in accordance with other provisions of this contract or as required by the Contracting Officer; and

[http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/dfars/dfars252\\_220.htm](http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/dfars/dfars252_220.htm)

1/15/2003

**Enclosure 33**  
**DFARS 252.223-7002 Safety Precautions for Ammunition and Explosives**

01/15/03 WED 11:09 FAX

14003

DFARS 252.220 thru 252.226

Page 3 of 4

(3) Submit a written report to the Contracting Officer.

*(e) Contractor responsibility for safety.*

(1) Nothing in this clause, nor any Government action or failure to act in surveillance of this contract, shall relieve the Contractor of its responsibility for the safety of-

- (i) The Contractor's personnel and property;
- (ii) The Government's personnel and property; or
- (iii) The general public.

(2) Nothing in this clause shall relieve the Contractor of its responsibility for complying with applicable Federal, State, and local laws, ordinances, codes, and regulations (including those requiring the obtaining of licenses and permits) in connection with the performance of this contract.

*(f) Contractor responsibility for contract performance.*

(1) Neither the number or frequency of inspections performed by the Government, nor the degree of surveillance exercised by the Government, relieve the Contractor of its responsibility for contract performance.

(2) If the Government acts or fails to act in surveillance or enforcement of the safety requirements of this contract, this does not impose or add to any liability of the Government.

*(g) Subcontractors.*

(1) The Contractor shall insert this clause, including this paragraph (g), in every subcontract that involves ammunition or explosives.

(i) The clause shall include a provision allowing authorized Government safety representatives to evaluate subcontractor safety programs, implementation, and facilities as the Government determines necessary.

(ii) **NOTE:** The Government Contracting Officer or authorized representative shall notify the prime Contractor of all findings concerning subcontractor safety and compliance with the manual. The Contracting Officer or authorized representative may furnish copies to the subcontractor. The Contractor in turn shall communicate directly with the subcontractor, substituting its name for references to "the Government". The Contractor and higher tier subcontractors shall also include provisions to allow direction to cease performance of the subcontract if a serious uncorrected or recurring safety deficiency potentially causes an

[http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/dfars/dfars252\\_220.htm](http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/dfars/dfars252_220.htm)

1/15/2003

**Enclosure 33**  
**DFARS 252.223-7002 Safety Precautions for Ammunition and Explosives**

01/15/03 WED 11:10 FAX

004

DFARS 252.220 thru 252.226

Page 4 of 4

imminent hazard to DoD personnel, property, or contract performance.

(2) The Contractor agrees to ensure that the subcontractor complies with all contract safety requirements. The Contractor will determine the best method for verifying the adequacy of the subcontractor's compliance.

(3) The Contractor shall ensure that the subcontractor understands and agrees to the Government's right to access to the subcontractor's facilities, personnel, and safety program documentation to perform safety surveys. The Government performs these safety surveys of subcontractor facilities solely to prevent the occurrence of any mishap which would endanger the safety of DoD personnel or otherwise adversely impact upon the Government's contractual interests.

(4) The Contractor shall notify the Contracting Officer or authorized representative before issuing any subcontract when it involves ammunition or explosives. If the proposed subcontract represents a change in the place of performance, the Contractor shall request approval for such change in accordance with the clause of this contract entitled "Change in Place of Performance--Ammunition and Explosives".

(End of clause)

[http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/dfars/dfars252\\_220.htm](http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/dfars/dfars252_220.htm)

1/15/2003

**Enclosure 34**  
**NAVSEA Instruction 8020.9**



**DEPARTMENT OF THE NAVY**

NAVAL SEA SYSTEMS COMMAND  
2531 JEFFERSON DAVIS HWY  
ARLINGTON VA 22242-5180

IN REPLY REFER TO

NAVSEAINST 8020.9B

Ser N7121/482

21 May 01

**NAVSEA INSTRUCTION 8020.9B**

**From:** Commander, Naval Sea Systems Command

**Subj:** AMMUNITION AND EXPLOSIVES PERSONNEL QUALIFICATION AND  
CERTIFICATION PROGRAM

**Ref:** (a) OPNAVINST 8020.14/MCO P8020.11 (Series)  
(b) NAVSEA OP 5  
(c) CINCLANTFLTINST/CINCPACFLTINST 8023.5 (Series)  
(d) MCO 8023.3 (Series)  
(e) 48 CFR 252

**Encl:** (1) Definitions  
(2) Sample Forms

1. Purpose. To provide guidance and direction, in accordance with references (a) and (b), for activities to issue a local instruction implementing a Qualification and Certification (QUAL/CERT) Program for personnel who handle Ammunition and Explosives (A&E).

2. Cancellation. NAVSEAINST 8020.9A. This instruction has been substantially rewritten and should be reviewed in its entirety.

3. Scope. This instruction applies to all Department of Navy personnel (military, civilian and contractors) handling A&E per the guidelines of paragraph 1005 of reference (a).

4. Implementation. Activities shall be in compliance with this instruction within 180 days from the date of this instruction.

5. Objective. The inherent danger associated with handling A&E necessitates the requirement to establish a formal written program that will:

- a. Specify tasks requiring QUAL/CERT.
- b. Establish minimum qualification standards of personnel competency (e.g., training and Proficiency Demonstrations)



\*0693 - LD - 100 - 5662\*

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(PDs)), and level of supervision necessary for safe and successful performance of the task.

c. Establish a method of documenting personnel QUAL/CERT necessary to perform the task.

6. Background. Personnel error and failure to follow proper procedures are large contributors to explosive mishaps. This QUAL/CERT program requires activities to establish qualifications to safely handle A&E and to grant A&E handling permission, in the form of a certification, to individuals who have attained these qualifications.

7. Information. The following direction is provided to ensure compliance with this instruction:

a. Definitions and requirements of key terms are provided in enclosure (1).

b. Sample forms for recording Explosives Certification Approval and PDs are contained in enclosure (2).

c. Subject to Commanding Officer/Officer-in-Charge (CO/OIC) approval, personnel with records indicating they are qualified and certified in accordance with references (c) or (d) meet the requirements of this instruction.

d. Subject to CO/OIC approval, the following personnel meet the requirements of this instruction provided records are available indicating they are qualified by their warfare specialty or other suitable, recognized agency for the tasks noted:

(1) Security force personnel required to bear arms in the course of their duties (e.g. security teams and police).

(2) Personnel who operate weapons/explosives devices on approved ranges for the sole purposes of training or proficiency maintenance.

(3) Explosive Ordnance Disposal (EOD) personnel performing emergency EOD tasks or other A&E tasks that specifically require an EOD Naval Officers Billet Code/Naval Enlisted Classification.



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(4) Personnel who are only required to operate distress/emergency flare/signal devices.

8. Actions.

a. The CO/OIC of each activity shall:

(1) Ensure that the activity's QUAL/CERT instruction is updated or issued to comply with the requirements of this instruction, and includes appropriate administrative controls to ensure adequate record keeping and the long-term effectiveness and adaptability of the instruction.

(2) Appoint, in writing, QUAL/CERT Chairpersons and Board Members necessary to execute the QUAL/CERT Program.

(3) Retain approval authority for Initial Certifications.

(4) Ensure that all contracts requiring civilian personnel to handle A&E for the activity, when issued or renewed, contain:

(a) Clause 223-7002 of reference (e).

(b) Clause 223-7003 of reference (e), if applicable.

(c) A clause requiring the contractor's QUAL/CERT Program to meet the requirements of this instruction.

(d) A clause stating that all contractor personnel performing A&E tasks under the scope of the contract be covered in the contractor's or activity's QUAL/CERT program.

(e) A clause requiring the CO/OIC to authorize, in writing, all deviations by the contractor to this instruction.

b. QUAL/CERT Board Chairperson shall:

(1) Retain approval authority for Team Leader (TL) and Team Member (TM) certifications and re-certifications.

(2) Submit personnel qualifications, training records, and experience to the CO/OIC for Initial Certification.

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(3) Suspend certifications, in writing, when:

- (a) A qualification or certification has expired.
- (b) Personnel are involved in an explosives mishap.

(4) Revoke certifications, in writing, when:

(a) Personnel exhibit a flagrant disregard of safety precautions, reckless operation of equipment used to handle explosives, other behavior indicating incompetence or unreliability (e.g. use of drugs or alcohol).

(b) A mishap investigation determines an explosive mishap is caused by failure to follow authorized procedures.

c. Immediate Supervisors shall:

(1) Assign personnel only to tasks for which they are certified.

(2) Ensure that TM certified personnel are adequately supervised on site by TL certified personnel at all times.

(3) Submit all required documentation to the QUAL/CERT Board Chairperson indicating the individual meets the required qualifications.

(4) Immediately remove personnel from the job site if they are working in an unsafe manner or creating hazards for themselves or co-workers. Notify the QUAL/CERT Board Chairperson of disciplinary actions, poor performance, obvious deterioration in physical ability, or attitude problems that could adversely affect an individual's ability to work safely and efficiently.

(5) Provide copies of certification records to the receiving activity when sending personnel on temporary duty assignments.

d. QUAL/CERT Board Members shall:

(1) Evaluate personnel for certification and submit PDs to the immediate supervisor.

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(2) Be TL certified for the task in the Certification Areas for which they are appointed.

e. Individuals shall:

(1) Perform only those tasks to which they are certified.

(2) Inform their immediate supervisor and appropriate medical personnel of any changes in their health that may impair them in performing tasks involving A&E.

  
G. P. NANOS, JR.

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## Enclosure 34

### NAVSEA Instruction 8020.9

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#### DEFINITIONS

Ammunition and Explosives (A&E) - Any non-nuclear ordnance, ammunition, explosive or explosive material/item/device/hazardous waste classed or being developed to be classed as a United Nations Organization Class 1, Divisions 1 through 6 item.

Certification - A formal documented declaration by a QUAL/CERT Board Chairperson that an individual has met all of the qualification requirements. Certification shall be:

a. Valid for one-year and will expire on the last day of the month granted (e.g. granted on 12 June 2000 expires 30 June 2001).

b. Documented as a stand-alone form, enclosure (2) provides a sample format, or integrated into existing forms containing:

(1) QUAL/CERT Board Chairperson name and dated signature or identical CO/OIC information for Initial Certification.

(2) Supervisor name and dated signature.

(3) Personnel name and identification number (e.g., last four digits of social security number).

(4) TM or TL level certification to a specific CA.

Certification Area\* (CA) - The area a TM or TL is certified to work in, e.g.: ordnance families and the specific tasks to be performed within the ordnance family; general processes, such as radiography, RSSI, or transportation of explosives (including all A&E that would be subjected to that process); or Standard Operating Procedures (SOPs) or specific sections of SOPs that require similar training and job qualifications.

Initial Certification - The CO/OIC certification of the first TL QUAL/CERT Board Member to a CA or whenever a PD is not practical.

Proficiency Demonstration (PD) - The safe and effective performance by an individual seeking certification/re-certification of a task (an actual process operation specifically designed for the purpose of evaluating performance), witnessed and documented by a QUAL/CERT Board Member. PDs are:

Encl (1)

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- a. Prohibited from using A&E for first time TM certification.
- b. Required for first time TM and TL certifications.
- c. Required for re-certification unless documentation (e.g., the signed Worker/Supervisor Statement in an SOP) has been maintained and verified that the individual maintained qualifications through the performance of work within the CA.
- d. Documented as a stand-alone form, such as enclosure (2), or integrated into existing forms and shall contain:
  - (1) QUAL/CERT Board Member name and dated signature.
  - (2) Personnel name and identification number (last four digits of social security number).
  - (3) TM or TL level certification to a specific CA.
  - (4) Notation that PD was observed or verified.

Qualification - A requirement that personnel must meet before they can be certified at the TM or TL level to perform a task with A&E in a CA. Qualifications shall address the following requirements:

- a. Formal Training (e.g., Defense Ammunition Center A&E courses, Class A School, EOD School, technical or college degree, equipment licenses).
- b. Activity-specific training (e.g., on-the-job training, videos, exams, safety stand-downs, indoctrination in local regulations).
- c. PD requirements.
- d. Specific qualifications to proceed from TM to TL level.
- e. Medical documentation required by NAVMED P-117.
- f. Specific qualifications for TM and TL re-certification.

Qualification and Certification (QUAL/CERT) Board Chairperson - A Command appointed person who grants TM and TL certifications.

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Qualification and Certification (QUAL/CERT) Board Member\* - A Command appointed individual who evaluates personnel nominated for certification by observing/verifying individual PDs in writing.

Records - Official documentation supporting individual certification. Records shall be:

- a. Maintained in an auditable medium by the activity.
- b. Retained for the duration of an employee's certification for one-time qualifications and for a period of at least five years for others.

Standard Operating Procedures (SOPs) - Documents developed in accordance with NAVSEAINST 8023.11 (Series).

Task\* - Any job/process/evolution or series thereof requiring an individual to physically interface or to operate equipment/vehicles that physically interface with A&E.

Team Leader\* (TL) - Personnel certified to handle A&E without direct supervision, and who may provide directions to others.

Team Member\* (TM) - Personnel certified to handle A&E only under the direct supervision of a TL.

\*Terms so noted are preferred from a standardization aspect, but are optional; however, the definitions and associated requirements are mandatory. Other more appropriate terms may be employed in the activity's instruction, e.g., Apprentice or Trainee vice Team Member.

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SAMPLE FORMS

<b>EXPLOSIVES CERTIFICATION APPROVAL</b>	
NAME (Last, First Middle)	Employee ID Number
<b>SUPERVISOR STATEMENT:</b> I have reviewed all qualifications of this individual; they are complete and I recommend certification as indicated.	
<b>BOARD CHAIRPERSON STATEMENT:</b> I have reviewed all qualifications of this individual; they are complete and I grant certification as indicated.	
Cert Level: TM or TL	Cert Area:
Supervisor Name Printed:	Supervisor Signature and Date:
Board Chairperson Name Printed:	Board Chairperson Signature and Date:
Cert Level: TM or TL	Cert Area:
Supervisor Name Printed:	Supervisor Signature and Date:
Board Chairperson Name Printed:	Board Chairperson Signature and Date:

<b>PROFICIENCY DEMONSTRATION</b>	
NAME (Last, First Middle)	Employee ID Number
<b>QUAL/CERT BOARD MEMBER STATEMENT:</b> I have witnessed this individual demonstrate adequate proficiency and recommend certification as indicated.	
Cert Level: TM or TL	Cert Area:
Board Member Name Printed:	Board Member Signature and Date:
Cert Level: TM or TL	Cert Area:
Board Member Name Printed:	Board Member Signature and Date:
Cert Level: TM or TL	Cert Area:
Board Member Name Printed:	Board Member Signature and Date:

Encl (2)

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**Enclosure 35**

**Email from Nancy Thompson to Anne Caris 1/16/03. Subject: Certification  
for Shaw Eni**

-----Original Message-----

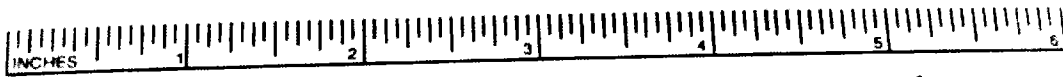
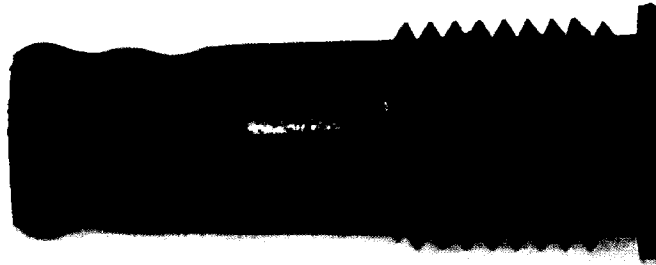
**From:** Thompson Nancy J IHMD  
**Sent:** Thursday, January 16, 2003 1:07 PM  
**To:** Caris Anne E IHMD  
**Cc:** Moore Norman J IHMD  
**Subject:** CERTIFICATION FOR SHAW ENI

Good afternoon Anne, As the Activity Qual/Cert Administrator, a review of records indicates Shaw ENI has not been qualified to IHDIVNAVSUFWARCENINST 8020.5.

Any questions, give me a call, x4924

Nancy

Enclosure 37  
Photographs of Base Ignition Fuze



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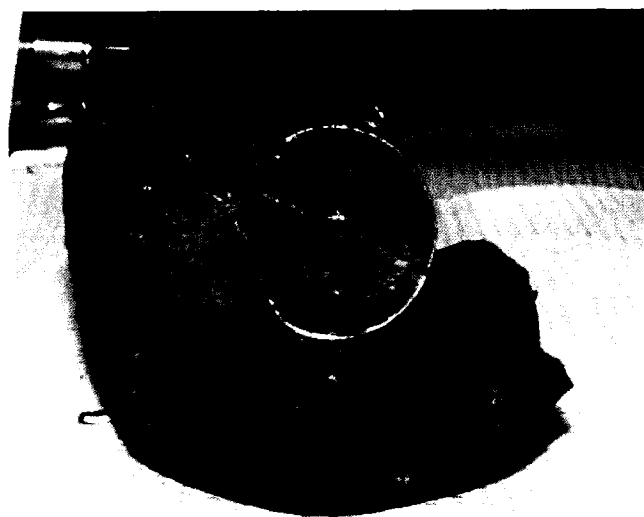


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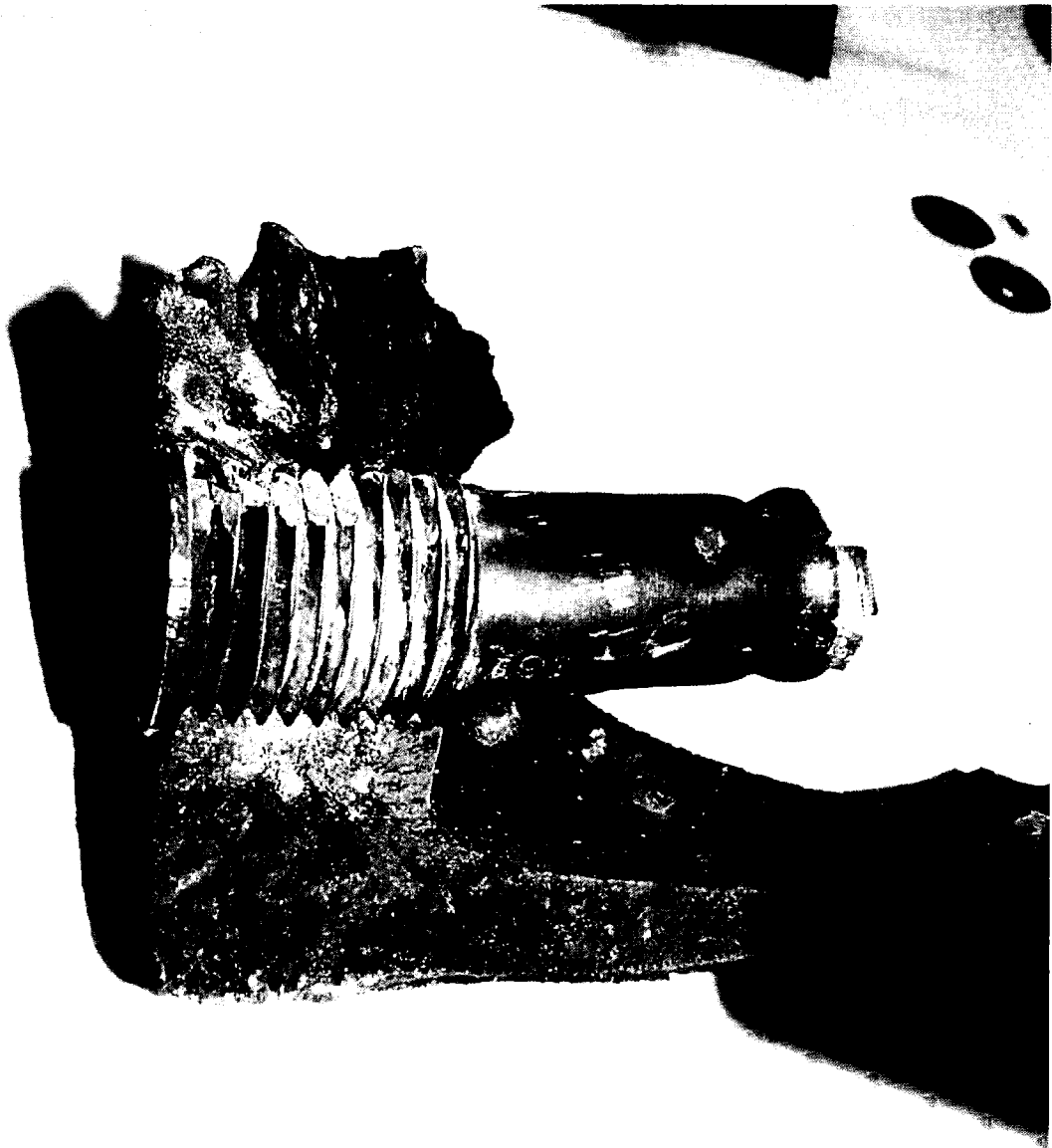


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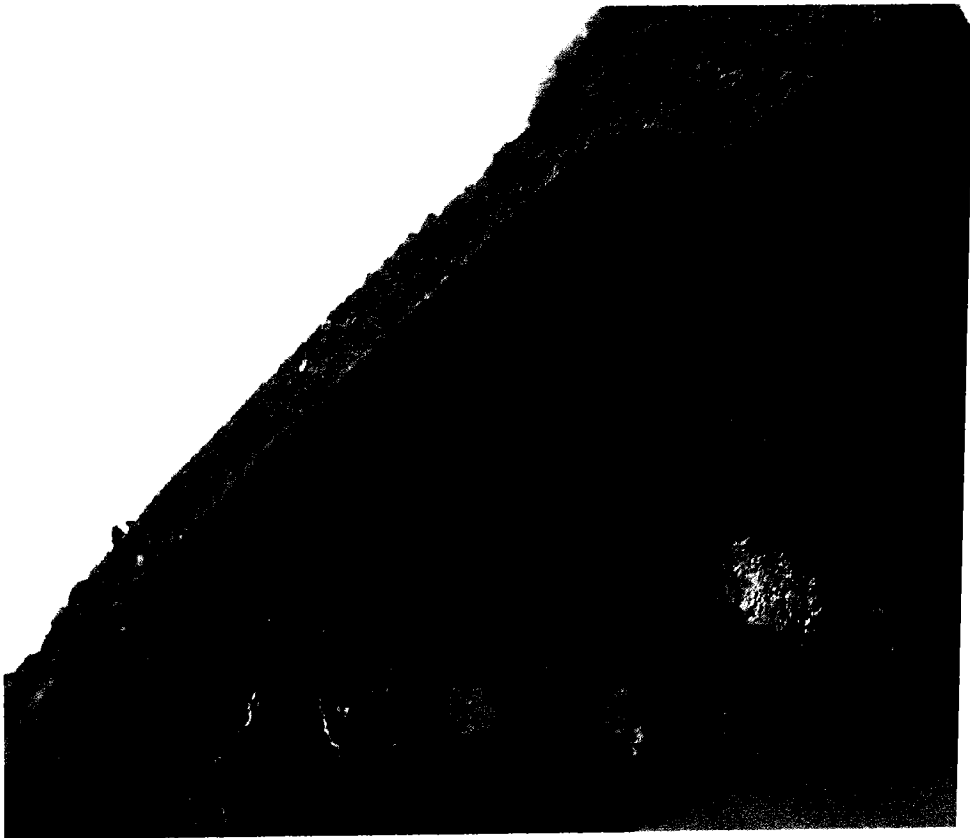
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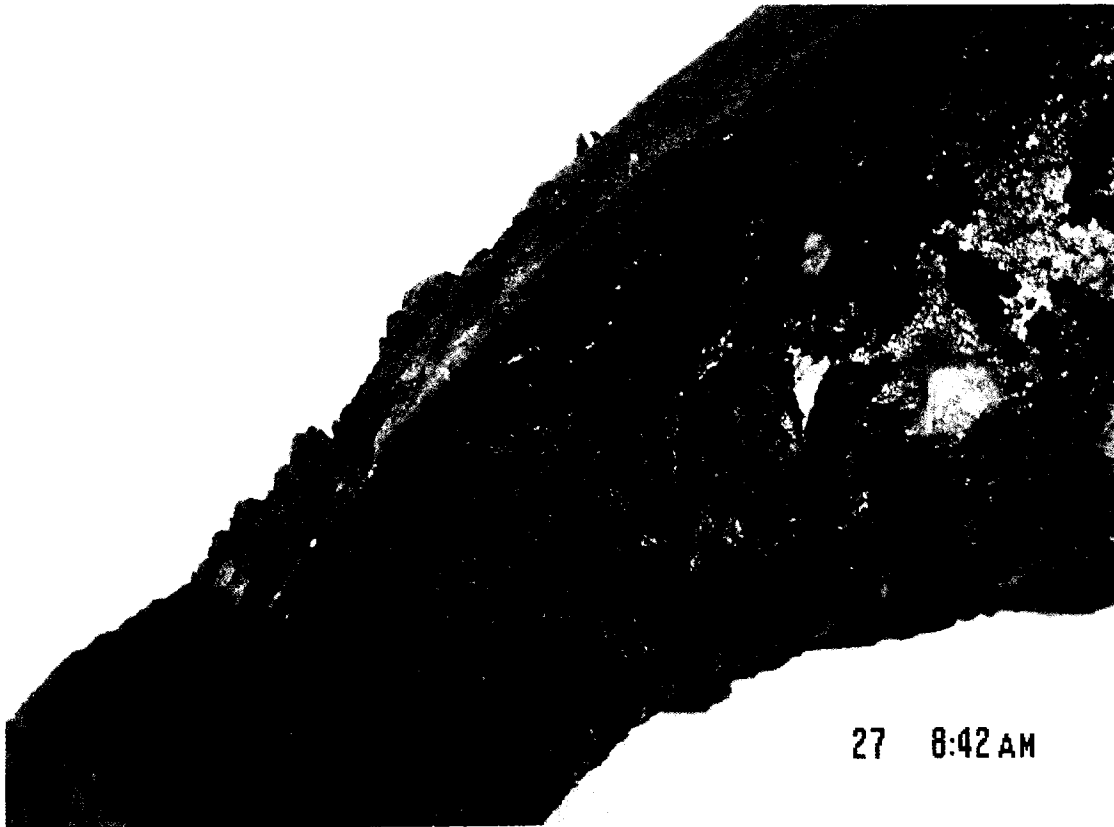


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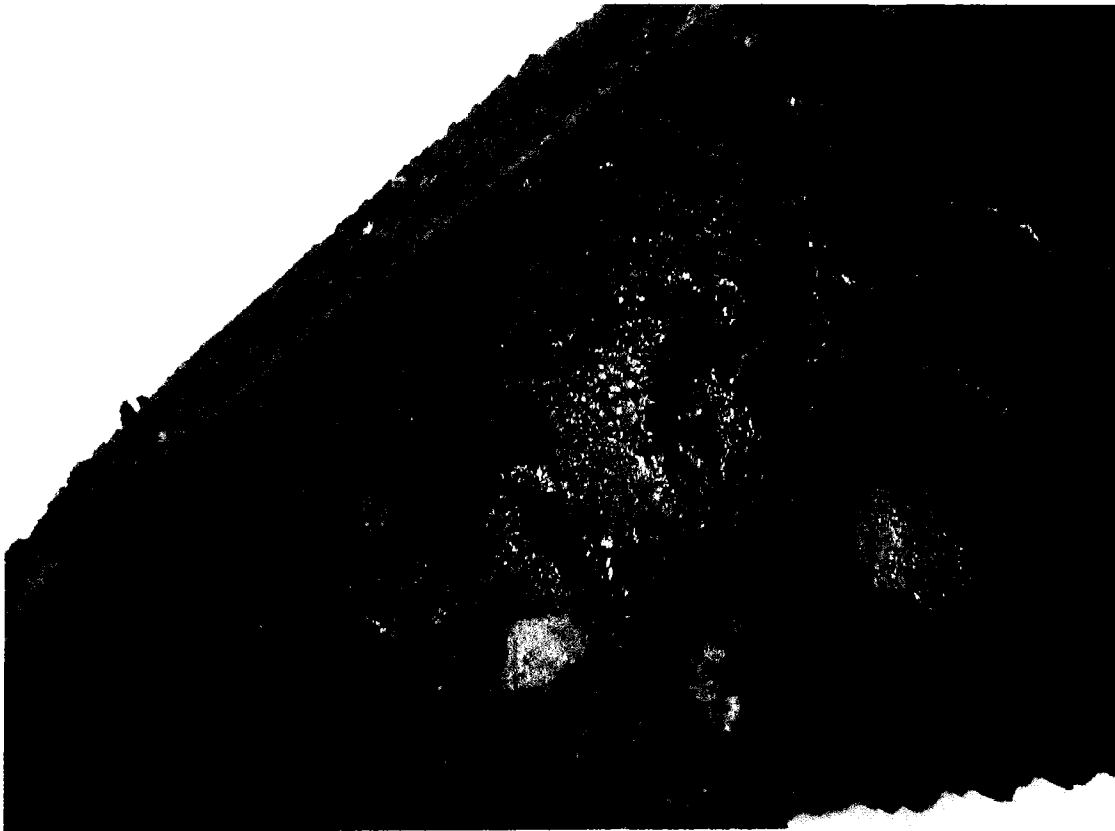




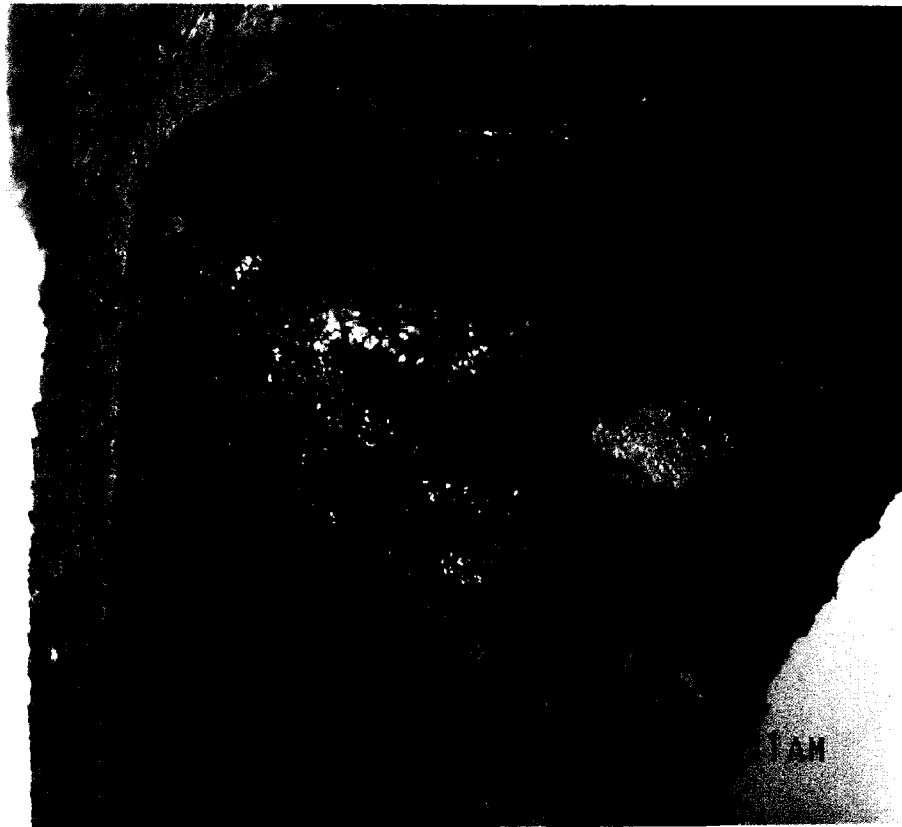
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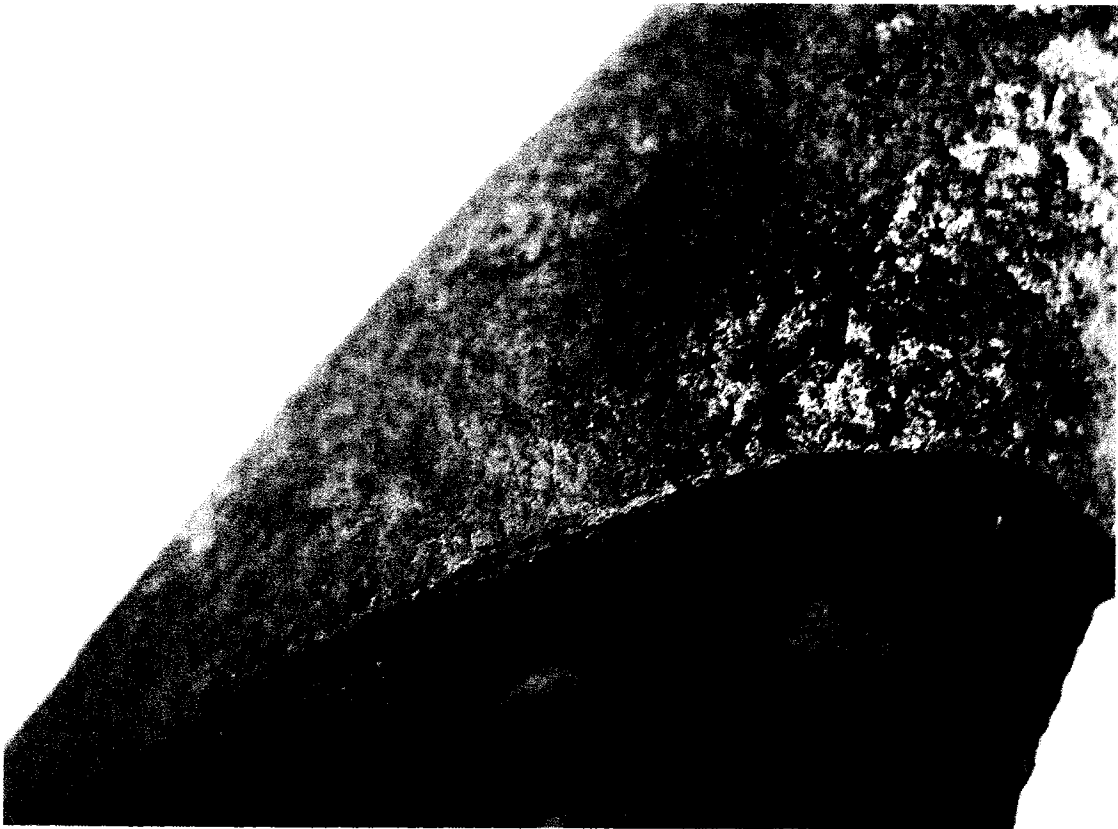
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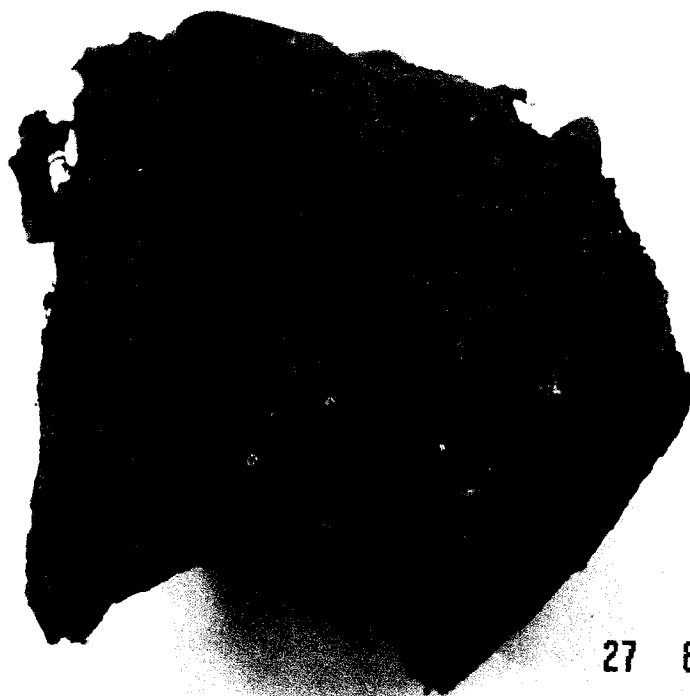
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**NAVSEA OP 1664 VOLUME 1**

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**CHANGE 1**

**U.S. EXPLOSIVE ORDNANCE**



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**28 MAY 1947**  
**CHANGED 15 JANUARY 1969**

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4-inch Common Mk 10 Mods 1, 2, and 3  
(Obsolete)

Guns used in.....	4"/50
Over-all length, inches.....	15.80
Diameter of base, inches.....	8.96
Distance base to band, inches.....	2.75
Width of band, inches.....	1.33
Diameter at bourrelet, inches.....	8.985
Filling.....	Black powder and TNT
Weight of filling, pounds.....	1.39
Weight of loaded projectile, pounds.....	33.0
Charge/weight ratio.....	4.21%
Cartridge Case.....	Mk 2 or Mk 2 Mod 3
Primer.....	Mk 13 and Mods
Tracer.....	Integral in fuze

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4-INCH PROJECTILE

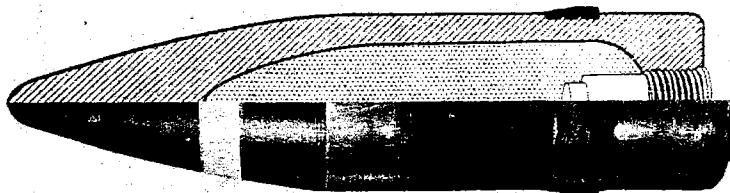


Figure 25. 4-inch Common Mk 10 Mods 1—3

Fuzes.....Base—Mk 10 Mod 4  
For target practice, this round is also issued  
B.L. & P. or B.L. & T. with adapter and Tracer  
Mk 6 Mod 1.

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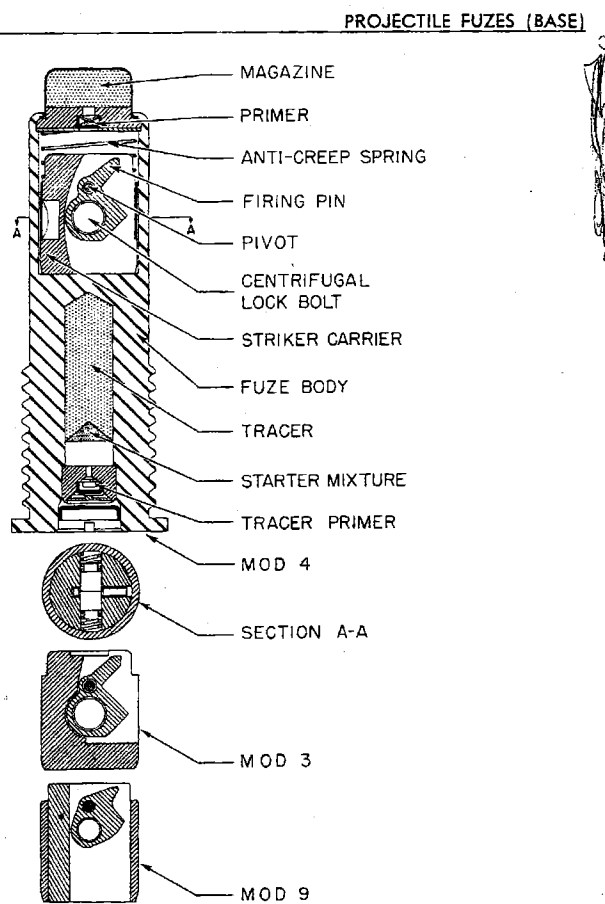


Figure 105. Base Ignition Fuse Mk 10

the tracer pyrotechnic. Centrifugal force causes the two lock bolts to move outward against their spring, unlocking the pivoted firing-pin. The firing pin then rotates into the armed po-



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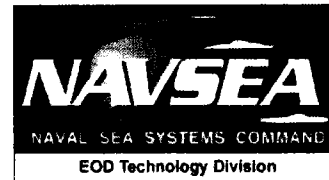
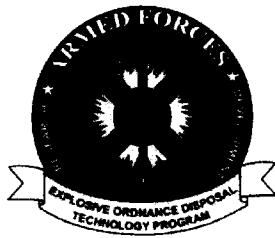
**U. S. EXPLOSIVE ORDNANCE**

**OP 1664**

sition, where it is aligned with the fuze primer. On impact, the striker carrier moves forward against the anti-creep spring, bringing the firing pin against the primer and initiating the black powder in the fuze magazine.

**Remarks:** Because of the peculiar shape of the firing pin, the effect of acceleration in the

gun causes it to lag. This force is greater than centrifugal force; so during the acceleration stage the striker cannot align itself with the primer. When acceleration ceases, centrifugal force takes charge and rotates the firing pin into alignment.



# *UXO Identification and Safety Class*

31 July 2002



## Enclosure 49 – NAVFAC ROICC training class.

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#### **Thomas Douglas**

Mr. Tom Douglas is a UXO Equipment Specialist for the Research and Development Department, Code 50, the Naval Explosive Ordnance Disposal Technology Division (NAVEODTECHDIV). He retired from the Air Force in 1997. He is a Master Explosive Ordnance Disposal Technician with over 26 years experience. His range clearance experience includes operations at Eglin AFB in Florida, Torrejon Air Base in Spain, Loring AFB in Maine, Alconbury AB in the United Kingdom and other ranges around the globe. He has provided UXO quality assessment (QA) supports for Adak Alaska and Miramar California. Mr. Douglas is currently working on the Automated Quality Assessment Program System (AQAPS) being developed for NAVFAC.

## Enclosure 49 – NAVFAC ROICC training class.

### *UXO Identification and Safety*



1

### *Objectives*

- Identify common Munitions and Explosives of Concern (MEC) types
- » Describe MEC identification features
- » Describe basic MEC terminology
- Basic explosives safety precautions

2

### *Safety Precautions*

- » *If you did not drop it, do not pick it up!*
- » Assume the MEC is armed.
- » Do not transmit any radio frequencies in the vicinity of a suspected MEC.
- » Do not touch it.
- » Do not rely on color codes for 100% ID--look for other indicators.

3

### *What is Ordnance ?*

- » ORDNANCE.....  
Explosives,  
chemicals,  
pyrotechnics, and  
similar stores, e.g.,  
bombs, guns and  
ammunition, flares,  
smoke, napalm.



4



## Enclosure 49 – NAVFAC ROICC training class.

### *Uses of Ordnance*

- ✦ Produce casualties
- ✦ Cause structural damage
- ✦ Deny area access
- ✦ Illuminate the battlefield
- ✦ Cover troop movement
- ✦ Defeat armored vehicles
- ✦ Harass and interdict the enemy

### *Ordnance Delivery Methods*



Projected



Dropped



Thrown



Placed

### *Common Ordnance Terms*

- ✦ High Explosive (HE)
- ✦ High Explosive Antitank (HEAT)



### *Common Ordnance Terms*


- ✦ Inert
- ✦ Target Practice (TP)
- ✦ Tracer (T)



**Enclosure 49 – NAVFAC ROICC training class.**

*Common Ordnance Terms*


- APERS
- Armor Piercing (AP)
- Depleted Uranium (DU)
- Incendiary



4


*Common Ordnance Terms*

- Drill/dummy
- Illumination




10

*Types of Ordnance*




Small arms ammunition




Grenades

11

*Types of Ordnance*



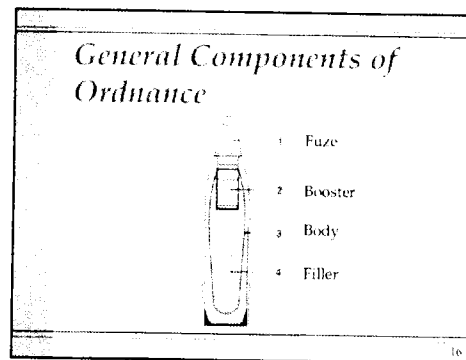
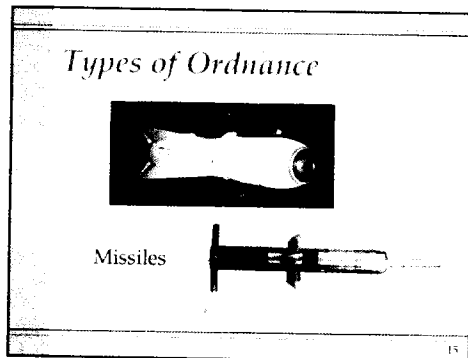
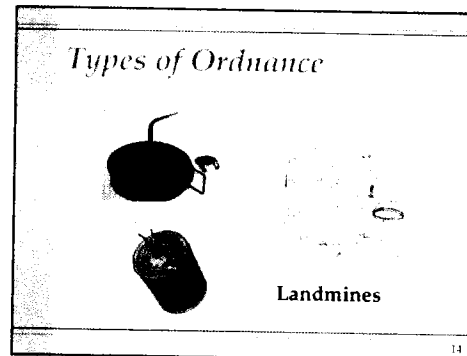
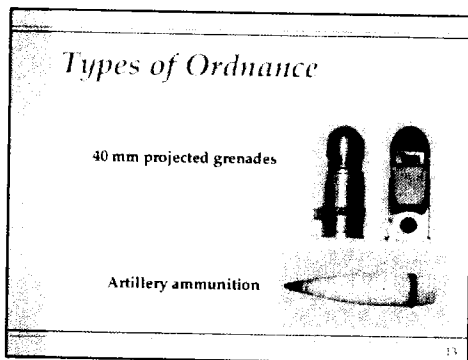
Rockets



Bombs

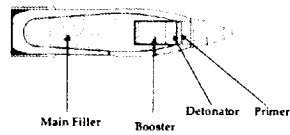
12

**Enclosure 49 – NAVFAC ROICC training class.**



## Enclosure 49 – NAVFAC ROICC training class.

### *Explosive Train for High Explosive Ordnance*



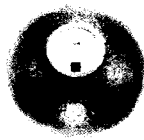
17

### *Ordnance Sensitivity*

- ◆ Type of explosive used in ordnance must be insensitive to shock and heat to provide a reasonable degree of safety in storage, shipping and handling.
- ◆ Unarmed ordnance is designed to be stable in handling and use.

18

### *UXO Sensitivity Over Time*



Civil War Ordnance

19

### *Ordnance Fuzing*

Fuze



≠

Fuse



20

## Enclosure 49 – NAVFAC ROICC training class.

### *Ordnance Fuzing*

- A device with explosive components designed to initiate a train of fire or detonation in ordnance.
- The fuze is the most important part of any munition.

21

### *Families of Fuzes*

- Chemical long delay booby-trap
- Time delay (submunitions)
- Mechanical Time (MT)
- Mechanical Time Super Quick (MTSQ)
- Point Detonating Self Destruct (PDSD)
- Point Detonating (PD)
- Impact inertia (submunitions)
- Mechanical all ways acting
- Electrical all ways acting
- Impact (submunitions)



22

### *Families of Fuzes*

- Point Initiating Base Detonating "spit-back" (PIBD)
- Time Super Quick (TSQ)
- Pull (land mines)
- Pressure release (land mines)
- Pressure (land mines)
- Mechanical clockwork long delay
- Piezo-electric (PIBD-L)
- Striker release (grenades)
- Multi-option



23

### *Families of Fuzes*

- Base Detonating (BD)
- Powder Train Time Fuze (PTTF)
- Pull-friction (grenades)
- Electrical Time (ET)
- Electrical delay (grenades)
- Proximity (VT)
- Influence
- Electrical long delay anti-disturbance



24

## Enclosure 49 – NAVFAC ROICC training class.

### *Common Forces Used to Arm Ordnance*

- ◆ Setback
- ◆ Centrifugal force
- ◆ Inertia

25

### *Common Forces Used to Arm Ordnance*

- ◆ SETBACK.....the relative rearward movement of component parts in ordnance undergoing acceleration during its launching.

26

### *Common Forces Used to Arm Ordnance*

- ◆ CENTRIFUGAL FORCE...  
An outward force on a body rotating about an axis.

The force with which a body rotating about a center tends to move radially outward from the center.

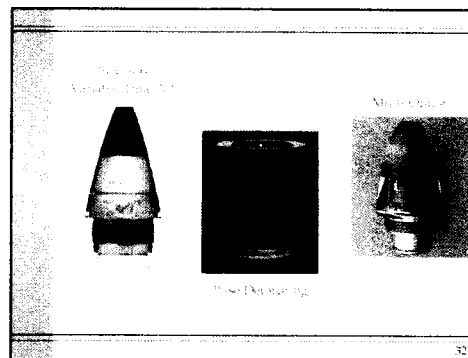
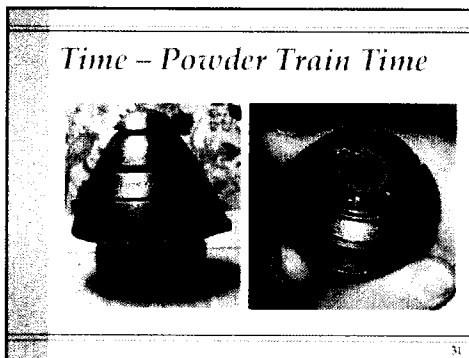
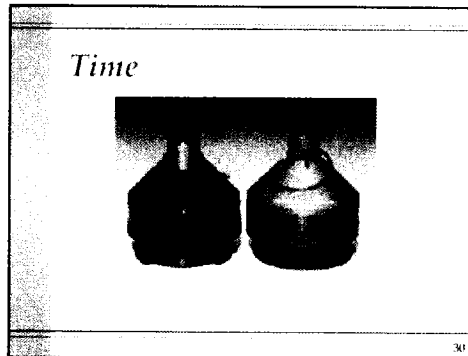
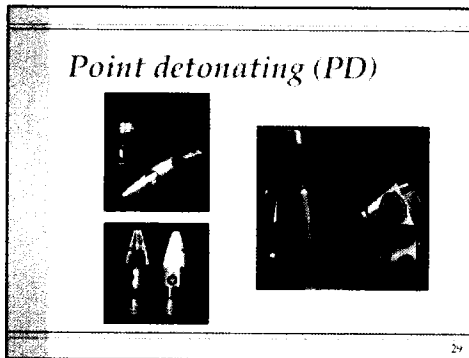
27

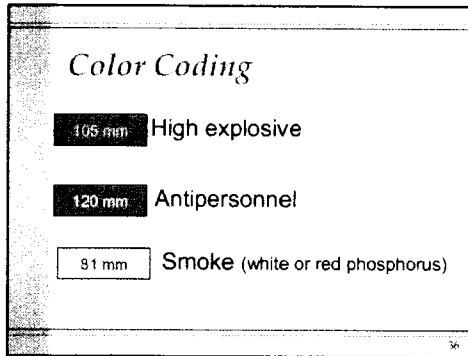
### *Common Forces Used to Arm Ordnance*

- ◆ INERTIA...The property of any material to resist change in its state of motion.

28

**Enclosure 49 – NAVFAC ROICC training class.**



[illegible]

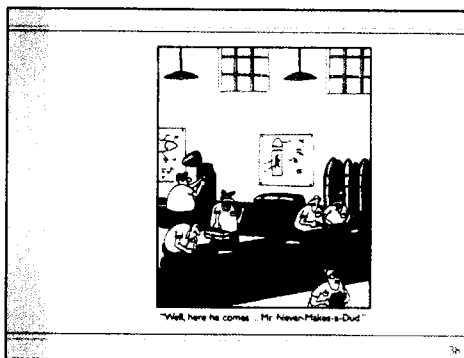


## Enclosure 49 – NAVFAC ROICC training class.

*Color Coding*


81 mm	Illumination
120 mm	Armor piercing
800-3	Target practice

37



*Definition of UXO*




- ✦ Military ordnance item
- ✦ Contains explosives, propellant, or other energetic materials
- ✦ Prepared for action
- ✦ Failed to function



39

*Causes of UXO*

- ✦ Improper fuze setting
- ✦ User error
- ✦ Malfunctioning of fuze



40

## Enclosure 49 – NAVFAC ROICC training class.

### *Small Arms Ammunition*

- Ammunition for weapons normally accompanying foot troops. Such as rifles, automatic rifles, pistols, shotguns, and machine guns up to 60 caliber.



41

### *Common Components*



42

### *Range of Sizes*

- Transition from caliber to millimeter was to ensure a common munition between NATO Alliance members.

30 caliber = .30 inches = 7.62 millimeters  
22 caliber = .22 inches = 5.56 millimeters

43

### *Most Common Types*

- **Ball**  
Intended for use against personnel, light material targets, and training. Not armor-piercing.
- **Armor-Piercing**  
Designed to penetrate armor or resistant targets.
- **Tracer**  
Ordnance that contains a mixture that leaves a trail of flame showing the trajectory of the ordnance.

44

## Enclosure 49 – NAVFAC ROICC training class.

### *Small Arms Safety Precautions*

- ❖ Do not strike or jar (primer)
- ❖ Do not expose to extreme heat

45

### *Grenades*

- ❖ Grenade.... Small fragmentation (defensive) or blast (offensive) ordnance, designed to be thrown by hand, but now can be projected from rifles, special launchers, and dispensers.



46

### *Types of Thrown Grenades*

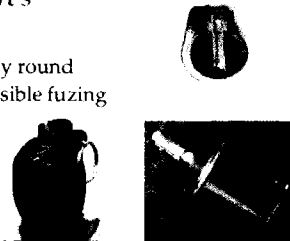
- ❖ High explosive (offensive/defensive)
- ❖ Chemical
- ❖ Illumination
- ❖ Smoke
- ❖ Simulators
- ❖ Practice



47

### *Typical Hand Grenade ID features*

- ❖ Small
- ❖ Usually round
- ❖ Has visible fuzing



48

Figure 1. The effect of the number of trials on the number of correct responses. The number of correct responses (Y-axis) is plotted against the number of trials (X-axis). The data shows a positive correlation between the number of trials and the number of correct responses, with a slight increase in the number of correct responses as the number of trials increases.

## 40

2

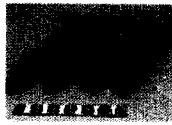
## 51

## 52

## Enclosure 49 – NAVFAC ROICC training class.

### *Types of Rifle Grenades*

- ✦ Antipersonnel
- ✦ Antitank
- ✦ Signaling (pyrotechnic)
- ✦ Screening (smoke)
- ✦ ID feature
  - Fins
  - Solid tail boom



53

### *Rifle Grenades*



Smoke



HEAT

54

### *Projected Grenades*

40mm Grenades, Fragmentation Distance: 345 Feet



55

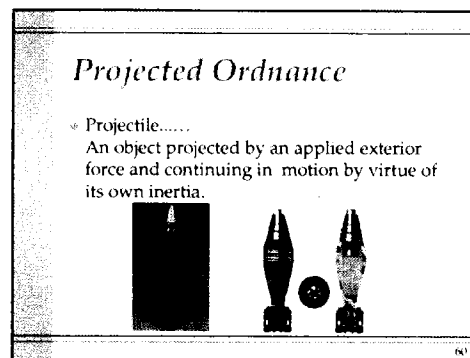
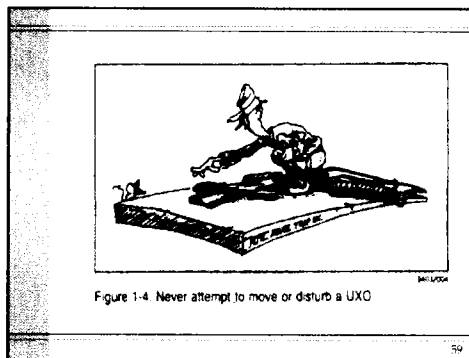
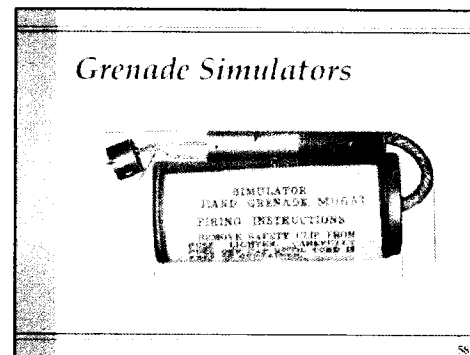
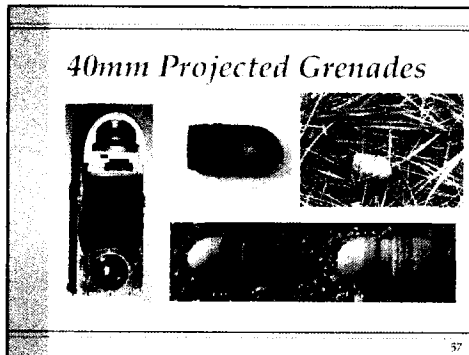
### *40mm Projected Grenades*

- ✦ High Explosive (HE)
- ✦ HE Dual Purpose (HEDP)
- ✦ Signaling (pyrotechnic)
- ✦ Riot control
- ✦ Practice



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## Enclosure 49 – NAVFAC ROICC training class.



## Enclosure 49 – NAVFAC ROICC training class.

### *Projected Ordnance Types*

- ❖ High Explosive (HE)
- ❖ High Explosive Antitank (HEAT)
- ❖ Armor Piercing (AP)
- ❖ Armor Piercing Cap (AP-C)

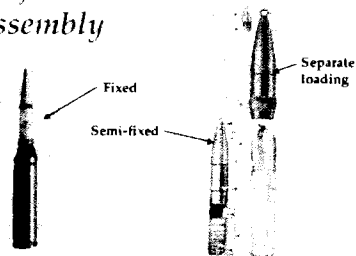
61

### *Projected Ordnance Types*

- ❖ Illumination
- ❖ Smoke (white or red phosphorus)
- ❖ Target Practice (TP)
- ❖ Antipersonnel (APERS)

62

### *Projected Ordnance Assembly*



63

### *Projected Ordnance In-flight Stabilization*



64

## Enclosure 49 – NAVFAC ROICC training class.

### *Projected Ordnance Deployment*

#### ARTILLERY: (Towed and Self Propelled)

**GUN.** A cannon with a relatively long barrel, operating with a relatively low angle of fire and having a high muzzle velocity.

**HOWITZER.** A short cannon that shoots shells at a high angle of fire and at a medium velocity.



65

### *Projected Ordnance Deployment*

#### TANKS

- SELF PROPELLED WEAPONS
- ARMORED PERSONNEL CARRIERS (APC)
  - Tracked and Wheeled
- LIGHT ARMORED VEHICLES (LAV)
- ASSAULT AMPHIBIOUS VEHICLES (AAV)



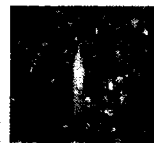
66

### *Projectile ID features*

- Color
- Rotating bands
- Base: welded, smooth, or pinned
- Breaks
- Stencils and markings

67

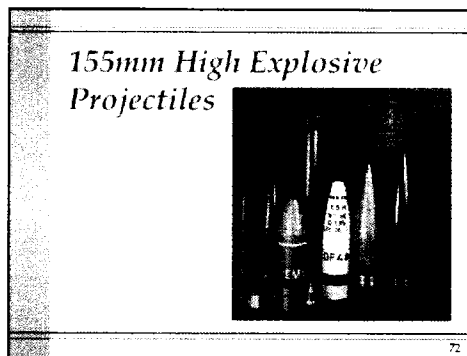
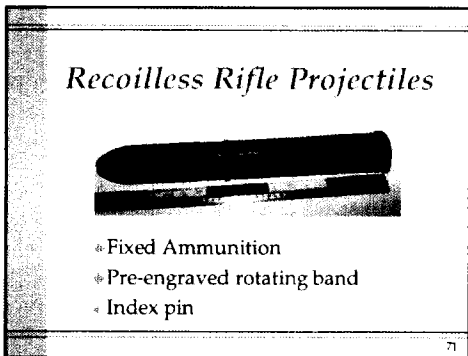
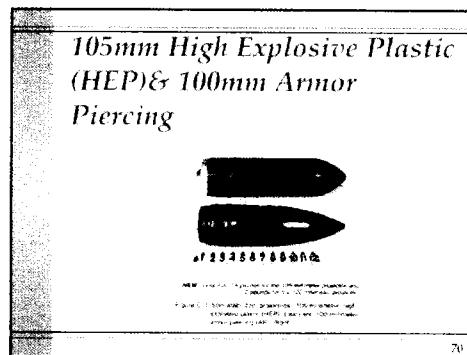
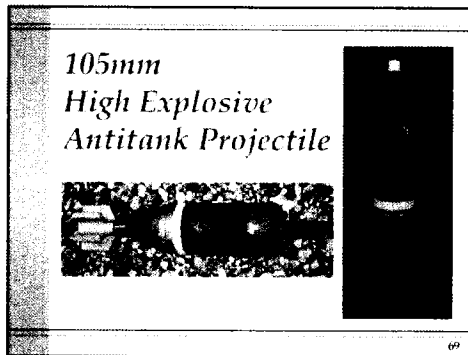
### *105mm Projectiles*



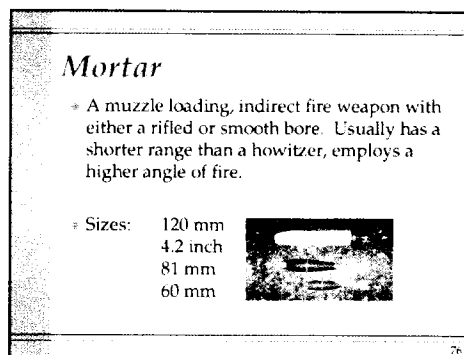
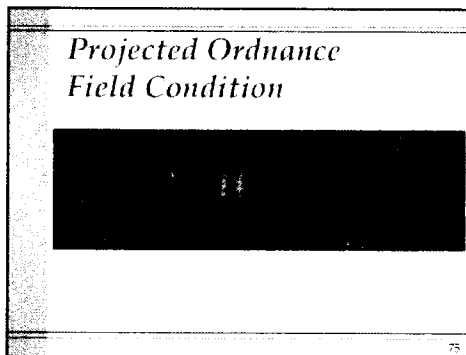
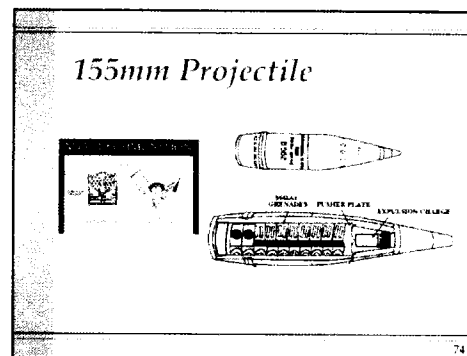
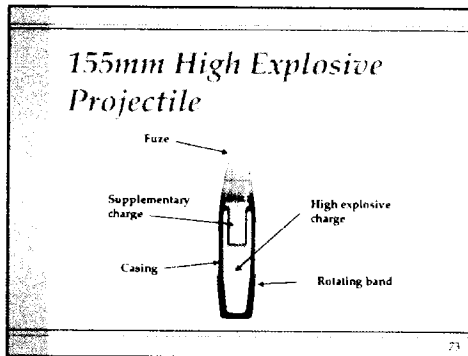
68



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## Enclosure 49 – NAVFAC ROICC training class.



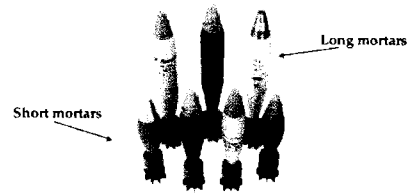
**Enclosure 49 – NAVFAC ROICC training class.**

*Mortar ID features*

- Color
- Number of fins
- Number of holes in tail boom
- Stenciling and marking
- Size (diameter, length)

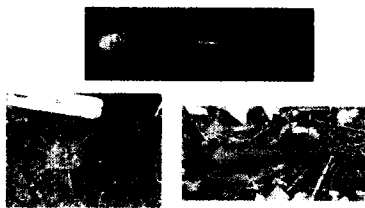
77

*60mm Mortars*



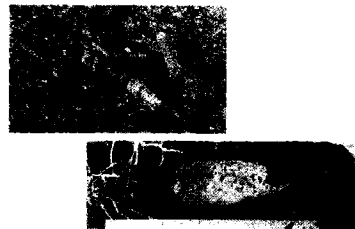
78

*60mm Mortar Field Condition*



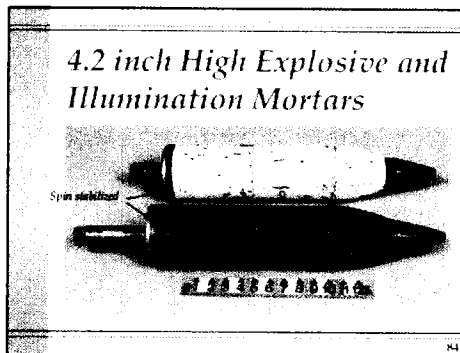
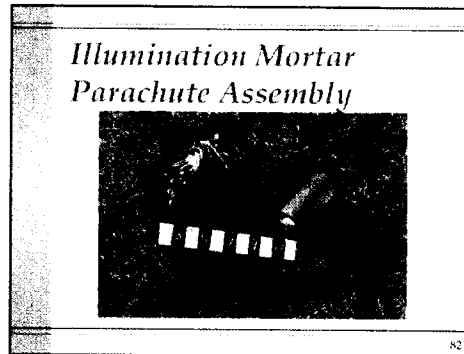
79

*81mm Mortar Field Condition*



80

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## Enclosure 49 – NAVFAC ROICC training class.

### 4.2 Mortar



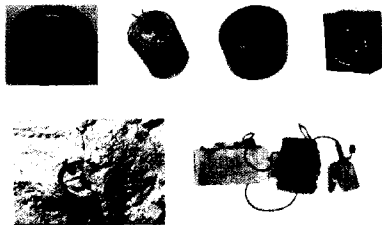
85

### Landmines

- An explosive or other material, normally encased, designed to destroy or damage ground vehicles, or to wound, kill, or otherwise incapacitate personnel. It may be detonated by the action of its victim, by the passage of time, or by controlled means.

86

### Landmines



87

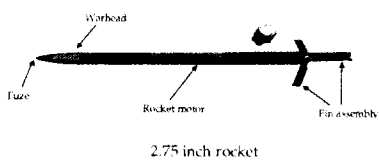
### Rockets

- Self-propelled ordnance, with or without a warhead, designed to travel above the surface of the earth and whose trajectory or course can not be controlled during flight. Excludes guided missiles and the like whose trajectory or course can be controlled remotely.
- Types: 2.75 inch  
3.5 inch  
66 mm light antitank weapon (LAW)  
84 mm AT-4  
5 inch

88

## Enclosure 49 – NAVFAC ROICC training class.

### *General Rocket Components*



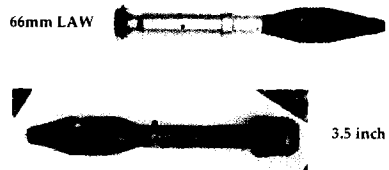
### *Rocket ID Features*

- Color
- Number, shape, and location of fins
- Venturi
- Stenciling and marking
- Size (diameter, length)

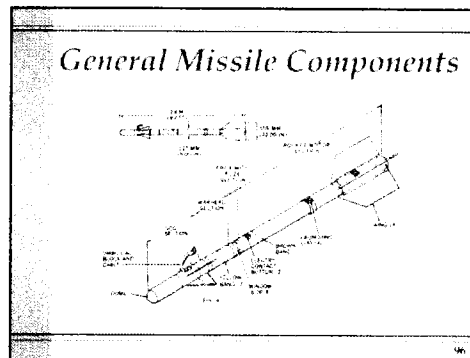
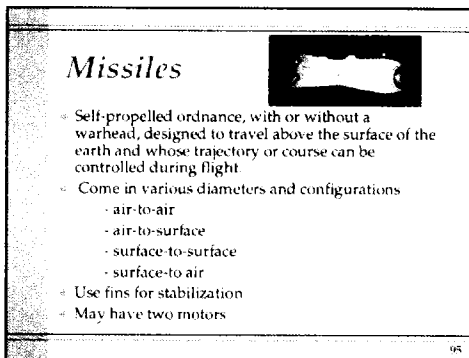
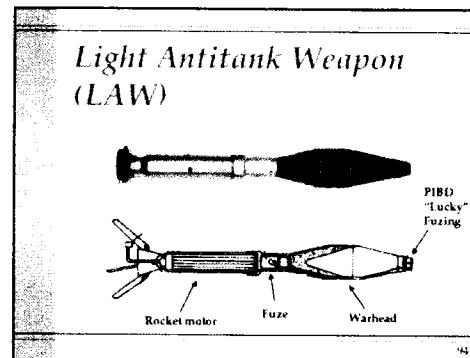
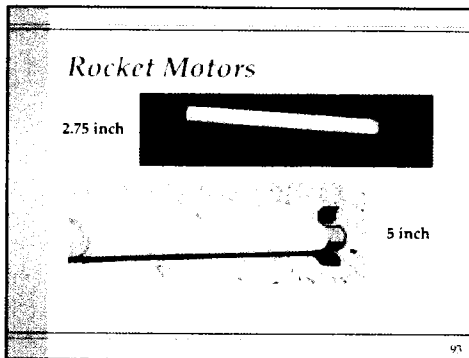
### *2.75 inch Rocket Warheads*



### *Rockets*



## Enclosure 49 – NAVFAC ROICC training class.



## Enclosure 49 – NAVFAC ROICC training class.

### *Missile ID Features*

- ❖ Color
- ❖ Number, shape, and location of fins
- ❖ Venturi
- ❖ Stenciling and marking
- ❖ Size (diameter, length)

97

### *Missiles*



Air-to-Surface



Surface-to-Air



Surface-to-Surface



Air-to-Air

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### *Missiles*



MK 1 Dragon



99

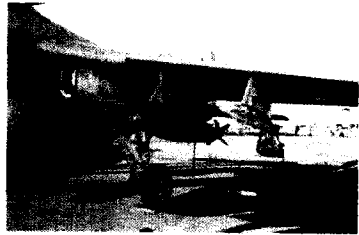


100



## Enclosure 49 – NAVFAC ROICC training class.

### *Bombs*



101

### *Bombs*

- In broad sense, an aerial bomb is designed to be dropped from an aircraft, carrying either a high explosive or another agent, and normally detonated on contact or by a timing device.

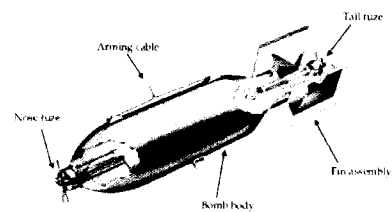
102

### *Bomb Types*

- Old series
- New series low drag
- New series high drag
- Fire
- Practice

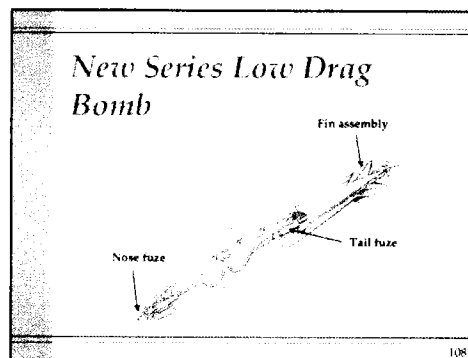
103

### *Old Series Bomb*

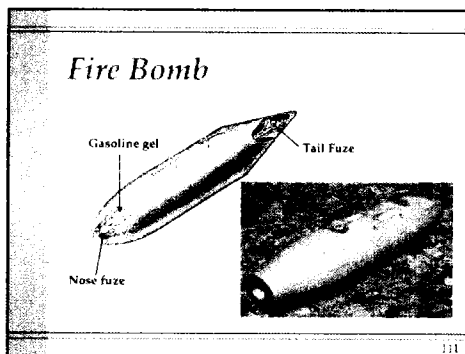
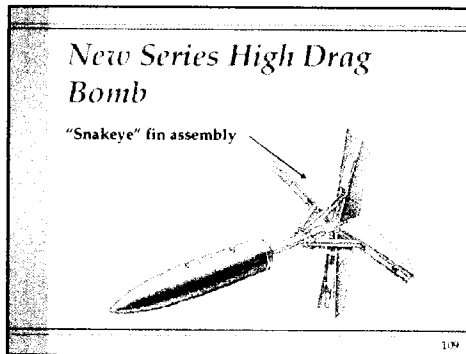


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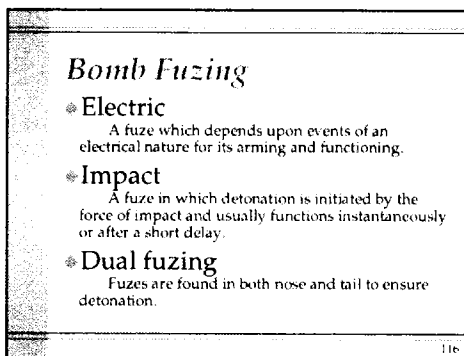
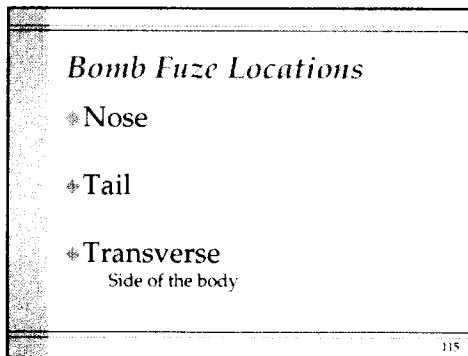
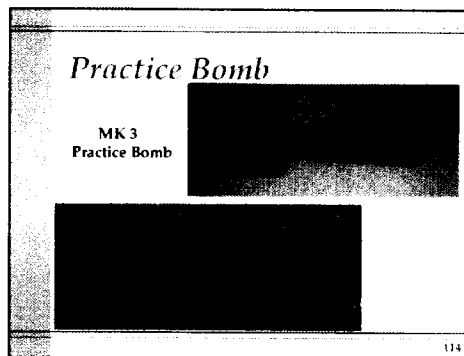
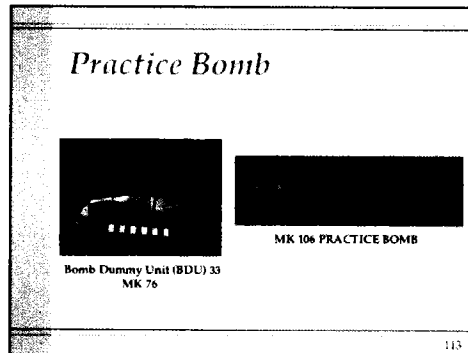
**Enclosure 49 – NAVFAC ROICC training class.**



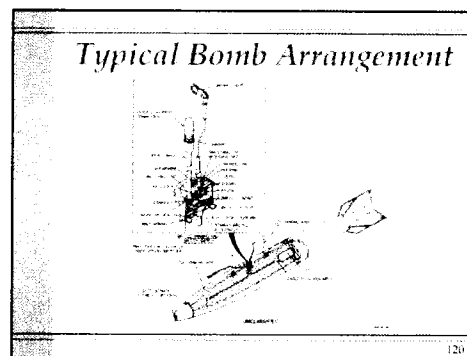
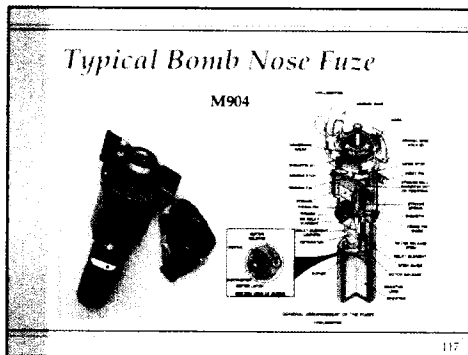
**Enclosure 49 – NAVFAC ROICC training class.**



## Enclosure 49 – NAVFAC ROICC training class.



**Enclosure 49 – NAVFAC ROICC training class.**



## Enclosure 49 – NAVFAC ROICC training class.

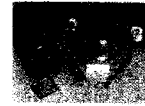
### *Bomb ID Features*

- \* Color
- \* Type of fins and/or retardation system
- \* Location and amount of fuze wells
- \* Suspension lug spacing
- \* Size (diameter, length)

121

### *Bomb ID Features*

- \* Lanyard lock
- \* Mk 122 arming and safety switch
- \* Stenciling and marking



122

### *Submunitions*

- \* Bombs, grenades, mines, and other small miscellaneous munition items which are dispensed from cluster bombs, cluster bomb unit (CBU) systems, modular weapon systems, and artillery dispensing rounds. These munitions, although generally small, have no standard size or shape.

123

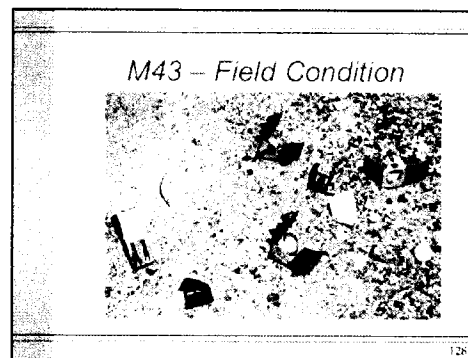
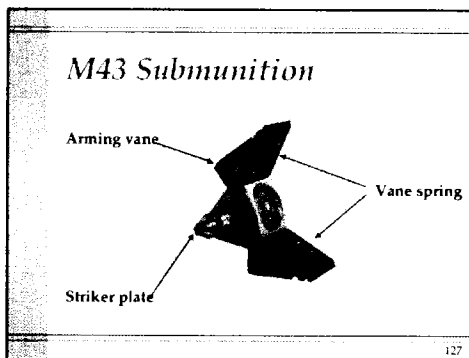
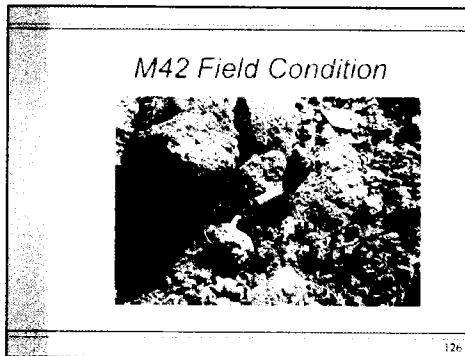
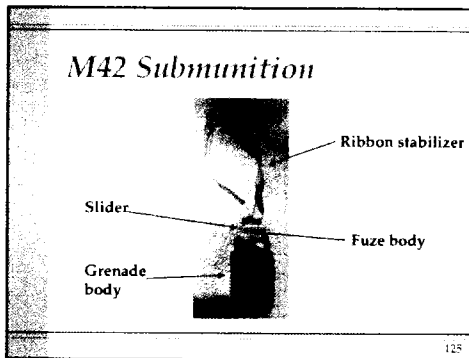
### *Submunition Dispensers*



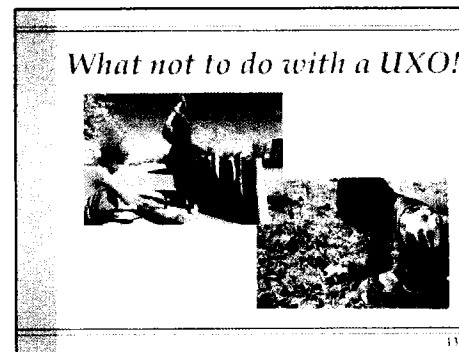
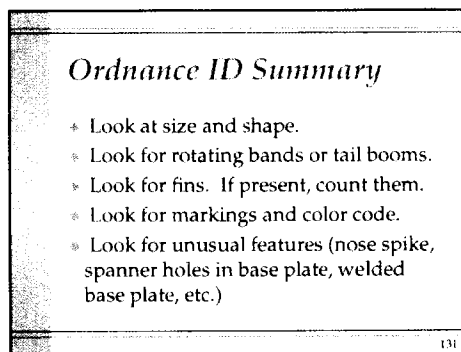
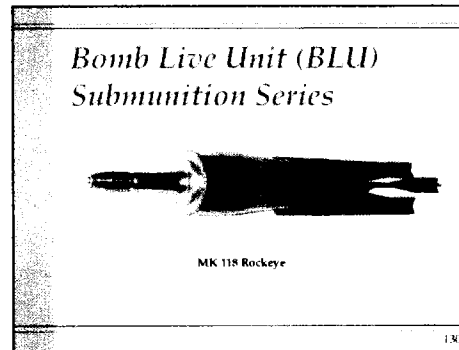
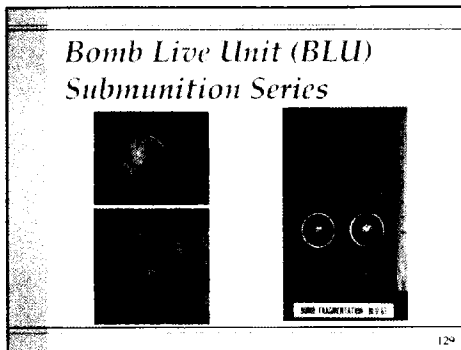
Cluster Bomb Unit (CBU-87/B)

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## Enclosure 49 – NAVFAC ROICC training class.

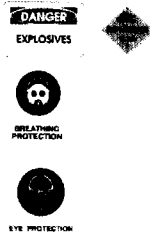




## Enclosure 49 – NAVFAC ROICC training class.

### *Sample Hazard Labels*

- High explosives
- White or Red Phosphorus
- Illumination



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### *Sample Hazard Labels*

- Colored smoke
- Tear agent (CS/CN)



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### *Visiting an MEC Site*

- Before the site visit
  - Review the Site Safety Plan
  - Identify who's going (remember Rule #2)
  - Identify your UXO escort
  - Obtain the proper personal protective equipment (PPE)
  - Obtain the proper equipment
    - Communication
    - Marking flags
  - Identify likely MEC to be encountered
  - Ensure the visit is planned for daylight hours with good ground visibility

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### *Visiting an MEC Site*

- While at the site
  - Avoid obviously contaminated areas or areas where you can't see where you step
  - Stay on paths
  - Listen to and follow your escort
  - Leave your cell phones and radios off...
  - Don't touch anything suspicious
    - (UXO doesn't always look like UXO)
  - If you didn't drop it, don't pick it up!
  - If you step on or see something suspicious, call your escort

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## Enclosure 49 – NAVFAC ROICC training class.

### *Visiting an MEC Site*

- ✦ Never remove ordnance scrap or debris from the site
- ✦ Take no souvenirs
- ✦ Leave the site as a group
  - ✦ Do not leave anyone alone on site—especially you!
- ✦ Follow site sign-out procedures

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### *Emergency Response and Contingency Procedures for Field Personnel*

- ✦ Qualified emergency medical technician (EMT) with a first-aid kit
- ✦ Communications lines and transportation
- ✦ Drenching or flushing facilities
- ✦ Procedures for reporting incidents
- ✦ Personnel roles, lines of authority, and communication procedures
- ✦ Emergency instructions and list of emergency contacts

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### *Emergency Response and Contingency Procedures for Field Personnel*

- ✦ Personnel trained in emergency recognition and prevention
- ✦ Understanding of evacuation criteria and procedures
- ✦ Route maps and pre-identified medical facilities
- ✦ Community alert criteria
- ✦ Emergency response and follow-up activities
- ✦ Safe transport and/or disposal for UXO
- ✦ Safe storage and transport of MEC/UXO demolition materials

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### *Personal Protective Equipment (PPE)*

- ✦ Personnel on site should be protected from
  - ✦ Weather
  - ✦ Sharp or hazardous objects
  - ✦ Flammable, reactive, toxic, or corrosive chemicals
- ✦ PPE for typical MEC ops include:
  - ✦ Clothing appropriate for the weather
  - ✦ Gloves
  - ✦ Rugged (non-steel toed) work boots
  - ✦ Approved safety glasses (ANSI Z87.1)

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## Enclosure 49 – NAVFAC ROICC training class.

### *Explosives Safety Public Awareness Program*

- \* Intended for those most likely effected by the presence of MEC at the site
  - Especially important when not all MEC can be removed
- \* Elements might include:
  - Training/education
  - Fliers/map annotations
  - Public forums
  - Institutional controls

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### *Explosives Safety Remediation Plan (ESRP)*

- \* Required by NAVSEA OP 5, Rev 7 (Para 2-1 (4.21))
- \* For property being leased, transferred, excessed, disposed of, or remediated of MEC
- \* Submitted through Naval Ordnance Safety and Security Activity (NOSSA) to Department of Defense Explosives Safety Board (DDESB) before remedial activities begin

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### *ESRP*

- \* Contents:
  - Background, previous MEC work, etc.
  - Maps with extent of contamination, clearance depth, intended use etc.
  - Description of MEC, frost line level, detection technologies, treatment methods, EOD support, etc.
  - Discussion of access and land use restrictions
  - Description of public involvement

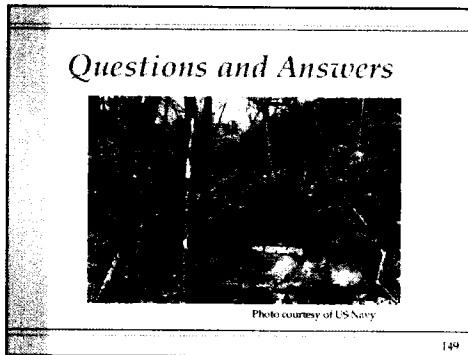
147

### *Safety Precautions Summary*

- \* *If you did not drop it, do not pick it up!*
- \* Assume the ordnance is armed.
- \* Do not transmit any radio frequencies in the vicinity of a suspected UXO.
- \* Do not touch it.
- \* Do not rely on color codes for 100% ID-look for other indicators.

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**Enclosure 49 – NAVFAC ROICC training class.**



# Munitions Response Site Management Course for RPMs

Presentation to:

2002 Navy and Marine Corps Cleanup Conference  
Oxnard, CA — 6 February 2002

Presented by: Doug Murray, EFANW

DSN 744-0056; murraydl@efanw.navfac.navy.mil

## Outline

- Need for the course
- Target audience
- Offerings and registration
- Course content
- Questions



BDU-45/B signal generating practice bomb.  
Photo courtesy of US Navy

## Need for the Course (1)

- The Navy and Marine Corps are responsible for their share of the estimated “10,000 suspected munitions contaminated sites at more than 2,500 installations under DoD control and 7,600 former defense installations that have been turned over for civic and private use” (1995 Jet Propulsion Laboratory report)

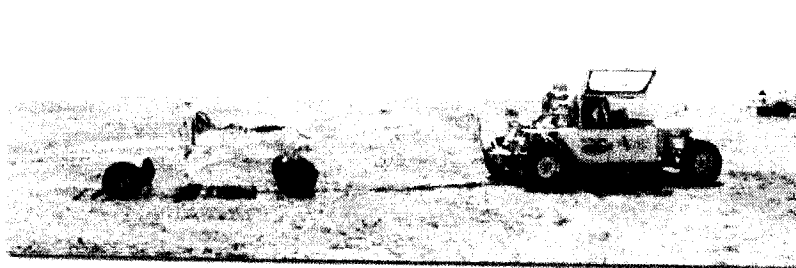
## Need for the Course (2)

- Final FY2002 Defense Bill contained provisions to:
  - Inventory (Sec. 311);
  - Establish a new program element (Sec. 312); and
  - Assess the environmental remediation of (Sec. 313) of unexploded ordnance, discarded military munitions, and munitions constituents at defense sites



## Need for the Course (3)

- RPMs, through the UXO Workgroup, identified to CECOS the requirement for munitions response site management education and training included in their RPM “toolbox”.



MTADS at  
Lowry  
Bombing  
Range, CO.  
Photo courtesy  
of Blackhawk  
UXO Services

# Target Audience

- RPMs
- RTMs
- BECs
- ROICCs
- EICs
- NTRs

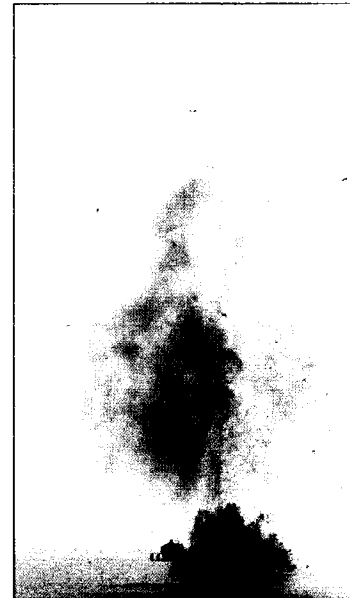


Photo courtesy  
of US Navy

## Offerings and Registration

- Tentative course offerings:

Date	Place
18-20 June	Silverdale, WA (pilot)
23-25 July	San Diego, CA
22-24 October	Norfolk, VA
10-12 December	Honolulu, HI

- Once the course dates are fixed you may register at the CECOS website  
<https://www.cecosp.navy.mil/schedule.asp>



## Course Instructors

- Cindy Turlington (CNO) – regulations, policy, and guidance
- Amy Walker (NFESC) – interface with CERCLA
- Doug Murray (EFANW) – munitions response technical stuff

# Course Content (1)

1. Munitions response basics
  - Types of munitions and explosives
  - Site and facility types where munitions and explosives are likely to be encountered
2. Regulations, policies, and guidance
  - Environmental Protection Agency
  - Department of Defense
  - Navy
  - Governing UXO cleanup regulations



WWII-era 81-mm mortar washed ashore at Andrew Lake Seawall, Adak Island, Alaska. Photo courtesy of Doug Murray.



## Course Content (2)

### 3. Roles and responsibilities

- Base safety office
- Naval Ordnance Safety and Security Agency
- Explosive Ordnance Disposal units
- Unexploded Ordnance (UXO) contractors
- Designated Disposition Authority
- Defense Reutilization and Marketing Offices and qualified recyclers

### 4. Munitions and explosives detection/ disposal technologies

- Terrestrial and underwater

## Course Content (3)

### 5. Quality Assurance/Quality Control programs

- Data Quality Objectives
- Standard Operating Procedures
- Field team certification
- Contractor, government, regulator programs

### 6. Hazard communication/public involvement

- Applicable regulatory documents
- Non-regulator documents
- Notification strategy



EM61 EMI detector.  
Photo courtesy of Geonics, Ltd.

## Course Content (4)

### 7. Historical records searches

- The need for searches
- Obtaining an archive search report (ASR)
- Using the ASR in the Site Inspection phase

### 8. Conceptual site model (CSM)

- How to build a CSM for a munitions-contaminated site
- CSM exercise



## Course Content (5)

### 9. Screening hazard assessment

- Identifying areas of potential concern
- Labeling sources and release mechanisms
- Reviewing various outcomes for munitions-contaminated sites

### 10. Investigations and remedial actions

- Approach
- Work plan development

### 11. Feasibility Study and Record of Decision

- Establishing remedial action objectives and general response actions

## Course Content (6)

### 12. Response complete

- Site close-out processes
- After-action report
- EBS
- FOST

### 13. Long-term management



4-inch projectile, Mare Island, CA.  
Photo courtesy of ECC

# Questions



3-inch Stokes mortar, Fort McClellan, AL.  
Photo courtesy of FWENC

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**DOD 4160.21-M Chapter 4 Paragraph B3**

DoD 4160.21-M, Defense Materiel Disposition Manual  
Chapter 4 – Property Requiring Special Processing  
Paragraph B

DRAFT

**3. Ammunition, Explosives, Dangerous Articles (AEDA), AEDA Residue and Range Residue, and Explosives-Contaminated Property (ECP)**

**a. General**

(1) This section consolidates the special processing guidance for AEDA, AEDA residue, range residue and Explosives-Contaminated Property (ECP).

(2) Each DoD Component will designate a manager to develop and coordinate AEDA, AEDA residue, range residue and ECP policies, procedures, and applicable training standards for subordinate Commands, as it pertains to disposal.

(3) The DoD Components will ensure commercial contract services for AEDA residue, range residue, and ECP conform to the requirements contained within this section.

(4) The generating activity shall dispose of all AEDA, uncertified range residue, and ECP, and assure compliance with 40 CFR 266, the Military Munitions Rule (MMR).

(5) Generating activities shall exercise extreme care in the disposal of property that is potentially dangerous to public health, safety and the environment. All such property having a sales value only for its basic material content shall be decontaminated (chemically or thermally neutralized, fired, or vented) by effective methods to minimize the potential for harm from contaminants and/or component substances. Component approved decontamination methods shall ensure that there is no hazard to the item (e.g., the area normally containing the hazardous material will be opened for visible inspection). Decontaminated AEDA, AEDA range residue, and ECP must be properly segregated, and shall not be commingled with any other property, either by the generating activities, commercial services contractors, or DRMOs. In addition, the property will not be in original configuration when released from DoD control.

(6) The generating activity is responsible for ensuring the retrieval, safeing, and associated costs of all AEDA, range residue or ECP containing and/or contaminated with explosives inadvertently released from DoD control and discovered to be live and/or unsafe. The initial responding DoD Component will serve as the DoD representative to ensure that all necessary actions are taken to remedy the situation and to ensure that all live or suspected live ordnance or contaminated material is either destroyed or returned to DoD control. In all instances where ownership of the material cannot be determined, the final determination will not be made until the material is returned to DoD control and the material is rendered safe and/or decontaminated. Cross-Service assistance will be provided as necessary and reimbursement will be made by the generating activity. Where ownership of the material cannot be determined, all generators with material at the site will share in the reimbursement for all associated costs.

(7) Incidents involving live AEDA or explosives contaminated material.

(a) Incidents involving the discovery of live AEDA, Range Residue or ECP outside DoD control which have the potential for injury and/or property loss or result in injury or

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**DOD 4160.21-M Chapter 4Paragraph B3**

property loss will be thoroughly investigated either by the owning generator or jointly by the DoD components potentially involved.

(b) Where the services of the DRMS were utilized for the disposal of the property the Commander of DRMS will request the initiation of the investigation through HQ DLA.

(c) All incidents will be reported through/to the appropriate Command channels. In addition to, or in the absence of, established reporting requirements, a Situation Report (SITREP) will be forwarded to the DoD Demilitarization Program Office, DLSC-LC, via facsimile, electronic mail (Email) or AUTODIN message within 12 hours of the incident. (FAX: DSN 427-1531; Email: AEDA@hq.dla.mil; AUTODIN: DLA FT BELVOIR VA//DLSC-LC//.) The SITREP will be formatted as shown in Attachment 2.

(8) Inspection/Certification.

(a) The generating activity shall ensure that this property is properly inspected to determine the presence or absence of explosive hazards prior to referral to the DRMO or release from DoD control. The inspection shall be performed by AEDA technicians or other technically qualified personnel as designated by the generating activity. Commercial contractors responsible for certifying AEDA residue, Range Residue or ECP must possess qualifications equal to those of technically qualified DoD personnel. The personnel certifying and verifying the inspection shall certify on the DTID, as follows:

"This certifies and verifies that the AEDA residue, Range Residue and/or Explosive Contaminated property listed has been 100 percent properly inspected and to the best of our knowledge and belief, are inert and/or free of explosives or related materials."

(b) Certifications require dual signatures. The first signature (certifier) may be either qualified DoD personnel or qualified contractor personnel. The second signature (verifier) must be a technically qualified DoD person, and U.S. citizen. Where Government contract requires contractor verification (in addition to Certification), this requirement may be waived. However, appropriate DoD quality assurance controls must be established.

(c) The certification and verification signatures must be directly above the typed or clearly stamped or legibly printed full name, rank/rate, complete organization name and address, and phone number (commercial and DSN) of the personnel that certified and verified the inspection. Each generating activity shall ensure that its servicing DRMO has a current list of the personnel and their sample signatures who are qualified and authorized to inspect, certify and verify AEDA Residue, Range Residue and ECP.

(d) Material which can not be certified as above will be treated as ECP or Group 2 Range Residue. Such materials may be sold or disposed of only in accordance with paragraph 3.d of this section.

(e) The generating activity will provide quality assurance inspections, certification/verification and, where appropriate, demilitarization or decontamination of individual ordnance items prior to certification (3.a.(8)(a) above) and release from DoD control.

(f) Incidents in which a certification is found to be incorrect (e.g., forged signatures, unauthorized signatures, improper inspections, improper documentation, etc.) will be fully

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investigated. Appropriate administrative or punitive actions will be taken.

(9) Generating activities and DRMOs shall utilize the Memorandum of Agreement (MOA) (Attachment 3) for in-place sales.

(10) Material covered under the preceding paragraph B3a. is also subject to the provisions and requirements of DoD 4160.21-M-1.

b. Ammunition Scrap.

(1) Ammunition Scrap includes unserviceable steel, aluminum, or copper-based metals (including brass) in the following categories:

- (a) Artillery cartridge cases, deprimed, clean.
- (b) Artillery cartridge cases, deprimed with propellant residue (film, fine dust, not measureable).
- (c) Artillery cartridge cases, with fired primers.
- (d) Gilding metal, rotating bands, clean.
- (e) Metal solids, munitions casings with energetic filler(s) removed, e.g., mines, projectiles, warheads, bombs, rocket motors, fuzes, or components.
- (f) Metal solids, clean.
- (g) Skeleton webbing, clean.
- (h) Small arms cartridge cases.
- (i) Expended rocket motors.
- (j) Related inert items, e.g., launchers, bomb dispensers, dummy rounds, inert components.
- (k) Spent canisters from smoke, riot control and pyrotechnic munitions, e.g., grenades, projectiles, signals, flares, or smoke pots.

(2) Army Industrial Operations Command (IOC) facilities which generate large quantities of aluminum, steel, or copper-based metals (including brass) shall request disposition instructions from Headquarters, IOC, ATTN: AMSIO-IB, Rock Island, IL 61299-6000. The disposition instructions shall provide that the material shall first be offered as U.S. GFM to brass mills supporting DoD ammunition production programs. If this material is not needed as GFM, it shall be sold by DRMS or disposed of through the Plant Clearance process.

(3) Other Military Service/Defense Agency activities no longer requiring ammunition scrap for reuse shall turn this property over to a DRMO for sale. The DTID shall contain a certification that the material has been inspected, certified and verified in accordance with paragraph B3a(8), above. If property cannot be certified as inert and/or free of explosives or other related materials, it will be processed as ECP, as described below. If sales proceeds are reimbursable, the DTID

**Enclosure 50.**  
**DOD 4160.21-M Chapter 4 Paragraph B3**

(1) For purposes of disposal, it shall be segregated and defined as either Group 1a, Group 1b or Group 2.

(a) Group 1 includes munitions components or casings that previously contained explosives or related materials, or property that does not contain items of a dangerous nature. Group 1 material can be certified inert and/or free of explosives or other related materials such as shrapnel, casings, cartridge cases, targets, bomb fins, or certain expended ordnance.

1 Group 1a. Firing range expended small arms cartridge cases and inert metals gleaned from range clean up. Metals gleaned include material for which the only use is for its basic material content (e.g.: clean shrapnel, target metal, etc.) and does not include material with any residual utility or capability or that is considered to be MLI or CCLI. Such material is eligible under the Resource Recovery and Recycling Program for disposition by a QRP in accordance with DoDI 7514.1, Pollution Prevention. DoD Components may exercise direct sale authority (QRP) for firing range expended small arms cartridge cases provided they are crushed, shredded or otherwise rendered unusable for their intended purpose prior to release from DoD control.

2 Group 1b. Any certifiable material or item not meeting the criteria in 1a above. A determination shall be made as to whether the material/item requires demilitarization (see DoD 4160.21-M-1). Damage sustained does not necessarily constitute demilitarization. Destruction shall, at a minimum, satisfy the provisions of the DoD 4160.21-M-1. This material is not eligible for a QRP.

(b) Group 2 includes inherently dangerous items that may potentially contain explosives or related material residue and cannot be certified as inert, such as practice bombs (e.g., BDU 33) or projectiles (duds), unexploded ordnance (UXO), fuzes, fuzed munitions, or 20 MM projectiles (MK-106).

(2) The generating activity:

(a) Shall inspect and certify all range residue that was fired or fired upon (hard target residue), and segregate it for disposal into Group 1a, Group 1b and Group 2. Inert metals (Group 1a) and hard target residue will be further segregated by metal type. All other materials in Groups 1a and 1b will be segregated by munitions type and stored to facilitate final re-inspection.

(b) May refer inspected Group 1a and demilitarized Group 1b property to a DRMO for in-place sales service. The generator shall take action as required by paragraph B3f(2) above.

(c) Shall accomplish and certify all required demilitarization and mutilation in accordance with DoD 4160.21-M-1 and other applicable guidance before referral to the DRMO. (NOTE: Under special circumstances, demilitarization or mutilation as a condition of sale may be used.)

(d) Shall retain custody and accountability for all range residue except expended cartridge cases.

1 Shall provide a separate, secured storage area for range residue that will be sold in place. The generating activity and the DRMO must agree upon storage locations for range residue and document these in the MOU (refer to paragraph B3a(6))

2 Dispose of through approved contracting channels any Group 1 and 2 property that the DRMO can not sell by the in-place sale service process.

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(3) The DRMO shall request the assistance of the generating activity to provide qualified personnel to investigate the incident and take appropriate actions.

(4) The generating activity shall respond by having qualified personnel investigate the incident and set a course of corrective action. Actions may include reinspection, recertification, retrieval, accountability, or custody, as appropriate. Actions shall be based upon applicable regulations and agreements and take into consideration public safety, environmental impact, and Government liability.

(5) In the event of mixed lots, the pertinent activities shall participate in a joint investigation and determine appropriate actions.

(6) Military Service activities shall establish a focal point to consult with the DRMO and the Sales Contracting Officer to determine the appropriate course of action based upon the MOU and pertinent regulations. When the generating activity and DRMO do not agree on incident remedial actions, the focal point shall coordinate with HQ DRMS to attempt to reach an agreement. If the focal point and DRMS do not agree, the focal point will consult with the HQ of the Military Service for coordination with HQ DLA. If the HQ of the Military Service and HQ DLA do not agree upon a course of action, they may jointly refer unresolved matters to Deputy Under Secretary of Defense (Logistics) (DUSD (L)).



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**DOD 4160.21-M-1 Pages 11-2 and A4-13 through A4-15**

DoD 4160.21-M-1

6. Other items normally will be demilitarized at a military installation. Demilitarization performed by a purchaser will be subject to appropriate special conditions. Surplus property to be donated, and requiring demilitarization, will be demilitarized to the extent as authorized in paragraph B below. The title to combatant ships and other property, as specifically authorized by the head of the owning DoD component, may be transferred to a purchaser upon receipt of full payment and presentation of adequate bond ensuring that demilitarization will be accomplished in accordance with the terms of a sales contract. Sales contracts for combatant ships will specify that hulls must be reduced to scrap and scrapping accomplished within the United States whenever practical.

7. A certificate substantially as quoted below will be signed and dated by a technically qualified Government representative who actually witnessed the demilitarization of the material whether performed by Government or contractor personnel. In cases where the witnessing of demilitarization would unnecessarily subject the witness to hazardous conditions or when the demilitarized material can be laid out to clearly display the residue from each item demilitarized, demilitarization may be certified through inspection of the residue. The certificate will be executed for all items demilitarized and will read as follows:

"I certify that (identify items) were demilitarized in accordance with (cite specific instructions (appendix and item number) that were complied with in the DoD 4160.21-M-1 and other applicable regulations)."

This certificate must be countersigned by a technically qualified U.S. Government representative (American citizen), designated by the responsible commander, who actually witnessed the demilitarization of the material or inspected the residue as provided above. The individual who countersigns should be at least in the next higher management level to the initial certifying individual. In the case of MAP Grant Aid property, a member of the Office of Defense Cooperation or the Defense Attache Office may countersign to the completed demilitarization. The DRMO, in compliance with his responsibility as outlined in DoD 4160.21-M, will at the time of receipt, place the demilitarization certificate in the applicable source document file for a period of 2 years, except small arms weapons demilitarization certificates

which will be retained indefinitely in a permanent file. Demilitarization certificates for demilitarization of all small arms weapons/receivers which require control under the DoD Small Arms Serialization Program (SASP) will be retained indefinitely in a permanent record file by the DoD activity responsible for the demilitarization of the small arms weapons and receivers. The countersignature for AEDA may be accomplished by a responsible U.S. citizen as designated by the local commander. A signed certificate will be furnished to the DRMO for audit purposes.

**WARNING: SIGNING A FALSE CERTIFICATE CONSTITUTES A FELONY AND MAY SUBJECT THE INDIVIDUAL TO CRIMINAL PROSECUTION.**

**B. EXCEPTIONS TO DEMILITARIZATION**

1. The demilitarization of items including foreign excess and other military type items does not apply when transfer is effected within DoD or to other agencies of the U.S. Government for utilization purposes. When transfer is made to another Federal Agency for use by that Agency, an agreement will be made to the effect that demilitarization requirements will be complied with prior to transfer of title to a purchaser.

NOTE: Federal Drug Administration (FDA) exempted lasers will not be transferred outside of DoD or donated or sold without prior approval of the ASD (FM&P) or his designee.

2. Disposition without demilitarization of other than classified materiel is also authorized under the conditions cited in subparagraphs a through a below:

a. By sale or transfer to friendly foreign governments, via FMS or MAP, including agencies and controlled companies thereof, under existing laws and DoD policy. Negotiated sales will not be made to commercial firms for resale to foreign governments.

NOTE: DoD Demilitarization policy must be followed when items of U.S. Origin are no longer required for their originally intended purpose.

b. By sales of military explosives, in accordance with applicable safety regulations, but only to technically qualified purchasers having a known capability for use, manufacture, processing or resale. The purchaser will be required to execute

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**DOD 4160.21-M-1 Pages 11-2 and A4-13 through A4-15**

CH 1  
DoD 4160.21-M-1

**CATEGORY III. AMMUNITION**  
**(CATEGORY III - U.S. MUNITIONS LIST)**

*A. The following items are designated as SME and require total destruction worldwide. They are normally assigned a Demilitarization Code "D." For items in this category which are considered live AEDA, Demilitarization Code "G" will be assigned.*

*Ammunition manufacturing and loading machines (except hand loading).*

*Technical data related to the manufacture or production of any defense article enumerated in subparagraphs A and B.*

*B. The following items are designated as SME and require key point demilitarization. They are normally assigned a Demilitarization Code "C," however for items in this category which are considered live AEDA, Demilitarization Code "G" will be assigned (NOTE: Components, parts, etc., listed below as a "key point" would themselves be assigned Demilitarization Code "D").*

*Key points to be demilitarized: Explosives, pyrotechnics, propellants, propellant fillers, cartridges, toxic material, rotating bands, incendiary or smoke content, other military design features, and features determined hazardous to the general public.*

*Ammunition for the arms listed in Categories I and II of the USML.*

*C. The following items are designated as MLI and the DoD Demilitarization Program Office has determined them to be of a critical and/or sensitive nature that requires total or key point destruction. These items and their key points are normally assigned a Demilitarization Code "E," however for items in this category which are considered live AEDA, Demilitarization Code "G" will be assigned.*

*Primers, and components therefore (total destruction).*

*Ammunition belting and linking machines.*

*Incendiary ammunition agents (except those having dual military and commercial use) (total destruction).*

*Detonating devices for ammunition (total destruction).*

*Ammunition belting and linking machines (key point destruction). Key points are specifically designed dies, blocks, jigs and special tooling.*

*All compounds specifically formulated for items in this category (except those having dual military and commercial use) (total destruction or neutralization).*

*Expendable cartridge/shell cases, caliber .60 and under, require demilitarization overseas or prior to export from the United States only.*

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4/

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CH 1  
DoD 4160.21-M

**NOTE:** Expended cartridge and shell casings over 30MM will be mutilated in the United States, Puerto Rico, the Virgin Islands, American Samoa, Guam, and the TTPI only if they are known to be defective.

**D. The following items are designated as MLI and do not require demilitarization. They are normally assigned a Demilitarization Code "B."**

*Ammunition components, including but not limited to powder bags, bullets, jackets, cores and shells (except shotgun shells).*

*All other components, parts, accessories and attachments not enumerated elsewhere in this category.*

*All other technical data and defense services directly related to any defense article enumerated in this category.*

**E. Method and degree of demilitarization:** As economically as practicable in accordance with existing environmental standards, safety, and operational regulations, to the point of assuring freedom from explosives, pyrotechnics, propellants, propellant fillers, toxic or incendiary materials, smoke content or design hazard.

**1. FOR AMMUNITION PROCURED BY THE DEPARTMENT OF THE ARMY,** technical instructions relating to ballistic missiles, large rockets, and ground handling equipment, as published in the MICOM Series 43 Technical Manuals, will be furnished by the Commander, U.S. Army Missile Command, ATTN: AMSMI-LC-ME-PP, Redstone Arsenal, AL 35898-5239.

**2. FOR CONVENTIONAL, CHEMICAL, AND ALL OTHER TYPES OF AMMUNITION AND AMMUNITION PECULIAR EQUIPMENT (APE), EXCLUDING LETHAL CHEMICAL AGENTS AND MATERIAL,** technical instructions will be provided by the U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-DSM, Rock Island, IL 61299-6000.

**3. FOR AMMUNITION PROCURED BY THE DEPARTMENT OF THE NAVY,** technical instructions will be issued by the Commander, Naval Sea Systems Command or by the Commander, Naval Air Systems Command, Department of the Navy, Washington, DC, whichever has technical control of the item.

**4. FOR AMMUNITION PROCURED BY THE DEPARTMENT OF THE AIR FORCE,** technical instructions will be issued by the Engineering and Reliability Branch (MMWR), Ogden Air Logistics Center, Ogden, UT 84056-5609.

**NOTE:** The figures mentioned below are illustrated in Appendix 7.

**5. ARTILLERY/MORTAR AMMUNITION COMPONENTS AND SIMILAR ITEMS OF ALL TYPES** (fig 55 through 58) including but not limited to high explosive, practice, inert loaded, incendiary, and smoke fillers. Remove explosive filler from projectile (wash out, burn out, etc.). Remove rotating band or score or deform bourrelet or gas check band or deform fuze cavity threads. Burn propellant unless otherwise instructed to retain for sale or other purposes. Deform fin assembly threads or fin blades. Cartridge cases (not returned to ICA designated contractors) will be deformed by off-center punch-out of primer or split case neck or puncture the lower sidewall with a minimum of 3/4 inch hole or deform lower sidewall, which will prevent chambering, or crush or press. Burn out smoke mixture or detonate smoke canister.

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CH 1  
DoD 4160.21-M-1

6. **OTHER NONEXPLOSIVE FILLED ITEMS** which perform a major function essential to the basic mission of the end item. Cut, crush, or process through a deactivation furnace. Burn or cut cartridge case lines and propelling charge bags. Cut, crush burn, or crush aircraft and ground signal cases. Crush or detonate piezoelectric (lucky) elements.

7. **INERT LOADED AMMUNITION, PROJECTILES, AND SIMILAR ITEMS OF ALL TYPES** loaded with inert filler to simulate service item. Remove rotating band from artillery projectiles and open the closure of the projectile body to expose the inert filler. On items without rotating bands, open the body closure to expose the inert filler and damage the closure surface to prevent reloading or resealing.

NOTE: For inert loaded *items* (concrete, sand, plaster) a potential explosive safety hazard exists when the internal filler is not exposed or unconfined during burning, melting or cutting. Heat generated from a demilitarization process can cause the filler, moisture and air to expand and burst sealed casings. For this reason, DRMOs will not accept inert loaded *items* unless the internal filler is exposed and unconfined. The internal filler may be exposed by removal of the fuze well from the cavity, removal of base plates, or by puncturing/drilling holes in the bomb casing.

8. **TECHNICAL DATA** will be demilitarized by burning, shredding or pulping.

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# Enclosure 52. NAVSEAINST 8023.11



## DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND  
WASHINGTON, D.C. 20362-5101

IN REPLY REFER TO

NAVSEAINST 8023.11

OPR 665

13 March 1991

### NAVSEA INSTRUCTION 8023.11

From: Commander, Naval Sea Systems Command

Subj: STANDARD OPERATING PROCEDURES FOR THE PROCESSING OF  
EXPENDABLE ORDNANCE AT NAVY AND MARINE CORPS ACTIVITIES

Ref: (a) OPNAVINST 8023.2C  
(b) NAVSEA OP 5 VOL 1 Fifth Revision

Encl: (1) Definitions of Basic Terms  
(2) List of Source Materials  
(3) Format and Content  
(4) Development and Change Procedures

1. Purpose. To provide policy, guidance, and direction for developing and using Standard Operating Procedures (SOPs) for the processing of expendable (non-nuclear) ordnance at Navy and Marine Corps activities in accordance with references (a) and (b). This is a major revision to the current instruction.

2. Cancellation. NAVSEAINST 5220.2A of 29 November 1979 and forms NAVSEA 5220/5 through 5220/15.

3. Scope. Reference (b) requires that all naval activities develop written procedures prior to starting any operation involving ammunition or explosives. No process involving explosives will take place without approved, documented procedures. This instruction provides a standard for writing SOPs. SOPs are not intended to substitute for Ordnance Pamphlets (OPs) or other technical documentation, but to encompass that documentation and provide that direction, specific to the site where the operations are performed which allows the process to be safely accomplished. An SOP may be written to allow for changes within the process as long as the safety and technical requirements of the process are accomplished. This instruction applies at naval ordnance and weapon stations and other Naval and Marine Corps activities where explosives or ordnance are manufactured, handled, or stored. It applies whether the work is performed by Navy or contractor personnel at a Government owned activity or by Navy personnel at other activities and includes the following processes:

a. Recurring processing of expendable (non-nuclear) ordnance and/or their components intended for Fleet issue. This includes the processing of parts or ingredients intended to be used in the all-up-round or components.

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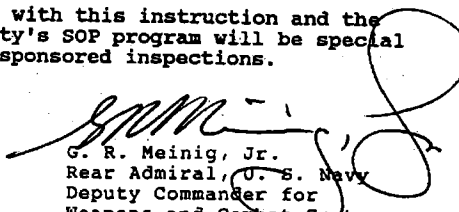
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(3) Within 1 year of the date of this instruction, ensure all new SOPs and major changes to SOPs for ongoing ordnance processes conducted at the activity are developed, approved, and maintained in accordance with this instruction. Within 3 years of the date of this instruction all active processes will have SOPs in accordance with this instruction. Use of Special Job Procedures (SJPs), Depot Maintenance Work Requirements (DMWRs), Local Operating Procedures (LOPs), etc., as stand-alone documents are not authorized beyond these time limits.

11. Inspection. Compliance with this instruction and the effectiveness of each activity's SOP program will be special interest items on NAVSEA 06 sponsored inspections.



G. R. Meinig, Jr.  
Rear Admiral, U. S. Navy  
Deputy Commander for  
Weapons and Combat Systems

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### DEFINITIONS OF BASIC TERMS

Commanding Officer (C) : Commander, Commanding Officer, Officer in Charge, or other senior officer having final responsibility for safety of the activity. Where host tenant agreements or interservice support agreements are in effect they shall clearly document the responsibilities of the activities in regard to SOP development, review and approval.

Explosive : A solid or liquid substance (or a mixture of substances) which is in itself capable, by chemical reaction, of producing gas at such temperature, pressure, and speed, that it can cause damage to the surroundings. Included are pyrotechnic substances even when they do not evolve gases. The term explosive includes all solid and liquid materials variously known as high explosives, propellants, and pyrotechnics (e.g., illuminant, smoke, delay, decoy flare, and incendiary compositions), together with igniters, primers, and initiators.

Expendable Ordnance : Ordnance and items (non-nuclear) defined in SPCCINST 8010.1 series with cognizance symbols OT, 2D, 2E, 2T, 4E, 4T, 6T, 8E, 8S, 8T, and 8U. This includes underwater mines, land mines, grenades, gun ammunition, demolition materials, pyrotechnics, guided missiles, bombs, rockets, torpedoes, etc.

All-Up Round : A complete round containing all of the explosives, materials, and components designed for a specific function. Examples include underwater mines, land mines, depth charges, torpedoes, guided missiles, bombs, gun ammunition, rockets, etc.

Component : Any part or sub-assembly of an all up round (AUR) that contains or is comprised of an explosive. Examples include fuzes, boosters, primers, detonators, warheads, rocket motors, explosive separators, propelling charges, etc. Also included are ingredients of explosive formulations when involved in processes involving modification of explosives (casting, pressing, grinding, machining, etc.).

Standard Operating Procedure (SOP) : The required document by which an activity provides its workers with detailed, step-by-step instructions for conducting safe processing of expendable ordnance or components and integrates the following factors:

- technical requirements.
- explosive safety standards.
- NAVOSH standards.

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- federal, state, local environmental protection standards.
- security and physical security directives.
- other factors as determined by the activity.

**Operation :** Any action to be performed on or to an ordnance item or component. Normally a series of operations is considered to be a process, but a single operation may be a process if it is the only action performed at the time.

**Technical Requirements:** Those requirements stated in the official Technical Data Package for an item. Includes Tech Manuals, Drawings, Specs, etc. Responsibility of Program Manager.

**Procedura:** A series of steps following in a regular, definite order. Responsibility of activity.

**Inactive Process:** Inactive processes are determined by the activity performing the process and defined in their SOP instruction. Factors to be considered include the length of time a process is not conducted, process complexity, process history and reasons for inactivity.

**Review:** The process of technical consideration and assessment of the content of the document by appropriate activities. For an SOP, the initial review, or review after expiration or major change should include:

- (a) Authorities aware of the technical requirements of the process (PM, EA, ISEA, local engineering).
- (b) Authorities responsible for local support of the process (operating force, public works, supply, publications, administration).
- (c) Safety, Medical, and Environmental authorities.
- (d) Command.

Annual reviews should be conducted by the operating supervisor with the operators. The supervisor should request assistance from other authorities when needed.

**Process :** Any operation or series of operations related to manufacture; explosive loading, assembly, and packing (LAP); maintenance, reconditioning, renovation, rework and repair; modification and conversion; receipt, storage, segregation and

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issue (RSS&I); demilitarization; disposal; handling, shipping, loading and unloading; or research, development, test, and evaluation (RDT&E) of ordnance end items or inherent components.

Recurring Process : A process which is well developed and which is intended to be performed by a constant set of procedures. All processes intended to result in, or contribute to, items for Fleet issue are considered to be Recurring Processes.

Non-Recurring Process : A process which is being developed and which is not yet intended to be standardized. This may be an R&D process or a change to an existing process when the product is not intended for Fleet issue.

Work Area : The area immediately surrounding the operators performing a process. An SOP shall be located in the work area such that any and all operators can easily refer to the SOP for direction. No work area is larger than the buildings in which the process is performed. In buildings with many bays in which different processes are performed, each bay is a work area.

SOP Validation : Validation is a demonstration that the SOP is correct and will result in a safe, effective and efficient operation. All validations will be documented. If possible, inert material will be used for validations. Process validations performed per NAVSEA OD 46574B include SOP validation.

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### LIST OF SOURCE MATERIALS

#### POLICY

OPNAVINST 8023.2C: U.S. Navy Explosives Safety Policies, Requirements, and Procedures (Department of the Navy Explosives Safety Policy Manual).

#### TECHNICAL

NAVSEA TWO10-AC-ORD-010: Inspection Requirements for Receipt, Storage and Issue of Navy and Marine Corps Conventional Ammunition.

NAVSEA TWO24-AA-ORD-010: Ammunition - Unserviceable, Suspended, and Limited Use.

NAVSEAINST 8010.4B: Receipt, Segregation, Storage and Issue of Ammunition, Ordnance Equipment, Components and Accessories.

NAVSEAINST 8010.5B: Insensitive Munitions Program Planning and Execution.

NAVSEA 8014.1A: Renovation of Ammunition.

NAVSEAINST 8015.1A: Non-Nuclear Ammunition Accountability Procedures.

NAVSEAINST 8020.3A: Lead Azide in Explosive Component Design.

NAVSEAINST 8020.5B: Qualification and Final (Type) Qualification Procedures for Navy Explosives.

NAVSEAINST 8020.8: Explosives Hazard Classification Procedures.

NAVSEAINST 8020.12: Ammunition Color Coding, Painting and Marking.

NAVSEAINST 8023.7A: Ammunition Storage Facilities.

NAVSEAINST 8510.10A: Certification of Torpedo Maintenance Activities.

NAVSEAINST 8510.11A: Torpedo MK 46 Maintenance Policy.

NAVSEAINST 8815.1B: Missile Maintenance Support Policy for Surface Launched Missiles.

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### SECURITY

DoD 5100.76M: Physical Security of Sensitive Conventional Arms, Ammunition and Explosives.

OPNAVINST 5510.1H: Department of the Navy Information and Personnel Security Program Regulation.

OPNAVINST 5530.13: Department of the Navy Physical Security Instruction for Sensitive Conventional Arms, Ammunition and Explosives (A,A&E).

NAVSEAINST 5510.2B: Physical Security, Access and Movement Control at Shore Activities.

### SAFETY, HEALTH, AND ENVIRONMENTAL PROTECTION

OPNAVINST 5090.1: Environmental and Natural Resources Protection Manual.

Code of Federal Regulations, Title 40.

Code of Federal Regulations, Title 29, Part 1910.

MIL-STD-882B: System Safety Program Requirements.

NAVORD OD 44942: Weapon System Safety Guidelines, Parts 1-4.

OPNAVINST 4110.2: Hazardous Material Control and Management (HMC&M).

OPNAVINST 5100.23B: Navy Occupational Safety and Health (NAVOSH) Program Manual.

OPNAVINST 5100.24A: Navy System Safety Program.

NAVSEAINST 5100.15: Navy Occupational Safety and Health (NAVOSH) Program; implementation of

NAVSEAINST 8020.7B: Hazards of Electromagnetic Radiation to Ordnance Safety Program.

NAVSEAINST 8020.9A: Non-nuclear Ordnance and Explosives Handling Qualification and Certification Program.

NAVSEA OP 4: Ammunition Afloat.

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NAVSEA OP 5, Volume 1: Ammunition and Explosives Ashore - Safety Regulations for Handling, Storing, Production, Renovation and Shipping.

NAVSEA OP 5, Volume 2: Ammunition and Explosives Ashore - Storage Data.

### QUALITY

OD 46574B: Weapons and Combat Systems Quality Assurance Requirements for Shore Stations and Engineering Agents.

QAP 100: NAVSEA/NAVAIR Naval Ordnance Quality Assurance Procedures for Fleet Activities.

### TRANSPORTATION

Recommendations on the TRANSPORT OF DANGEROUS GOODS, Sixth Rev. United Nations, New York. 1989. (Orange Book).

International Maritime Dangerous Goods Code Vols 1 through 4. Amendment 25-89. (IMDG Code).

Technical Instructions for the Safe Transport of Dangerous Goods by Air. 1989-1990 Ed. International Civil Aviation Organization (ICAO).

Title 49 CFR PARTS 383-399: Federal Motor Carrier Safety Regulations.

Title 46 CFR PART 146: Transportation of Military Explosives on Board Vessels.

NAVSEA OP 2165 Vols 1 and 2: Navy Transportation Safety Handbook for Ammunition, Explosives, and Related Hazardous Material.

NAVSEA OP 2239: Motor Vehicle Driver's Handbook, Ammunition, Explosives and Related Hazardous Material.

NAVSEA OP 3681: Motor Vehicle and Railcar Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Material.

NAVSEAINST 8020.13A: Transportation Accident Prevention and Emergency Response Involving Conventional DOD Munitions and Explosives.

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NAVSEAINST 8023.2C: Shipment of Explosive Materials and Other Dangerous Articles Through U.S. Navy Port Facilities.

NAVSEAINST 8023.8B: Transportation of Detonators and High Explosives in the Same Motor Vehicles or Aboard the Same Military Aircraft.

NAVSEAINST 8023.5C: Ammunition, Explosives and Related Hazardous Material Shipment Discrepancy Reporting.

NAVSEAINST 8023.10C: Transportation and Storage Data for Polaris, Poseidon and Trident Missiles and Explosive Component Parts.

### ADMINISTRATION/ORGANIZATION

NAVSEAINST 5400.57A Technical Responsibilities and Authority to Perform Engineering Functions for Combat Subsystems and Equipment.

NAVSEAINST 5401.1: Centers of Excellence at Naval Ordnance Shore Activities.

NAVSEAINST 5450.13A: Mobile Ammunition Evaluation and Reconditioning Units.

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## Enclosure 52. NAVSEAINST 8023.11

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### FORMAT AND CONTENT

Each SOP shall contain the following:

1. RECORD OF APPROVAL. This record contains spaces for signature and dating by personnel internal to the processing activity who developed or reviewed the SOP and provides a space for the Commanding Officers approval.
2. SUPERVISOR'S STATEMENT. Every process covered by an SOP must have a designated supervisor who is responsible to management for the operation. This statement indicates that the supervisor clearly understands his/her duties with regard to the SOP. The supervisor must review the SOP and sign the statement when he/she is first assigned responsibility for a process. This requirement also applies to acting supervisors when the regular supervisor is absent. During recurring processing, the supervisor must sign the statement upon his/her annual review of the SOP. A suggested Supervisor's Statement follows:

#### PROCESS SUPERVISOR'S STATEMENT

I have read this SOP. I understand it. To the best of my knowledge the processing described within this SOP can be done in a safe, healthful and environmentally sound manner. I have made sure all persons assigned to this process are qualified and have read and understand the requirements of this SOP and have signed the worker's statement for this process. I will conduct an annual review of this SOP during recurring processing. If deviations from this SOP are necessary, I will ensure that this processing is stopped until the SOP is revised and approved. If unexpected safety, health or environmental hazards are found, I will make sure this processing is stopped until the hazards have been eliminated.

Supervisor's Name	Date	Supervisor's Name	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

3. WORKER'S STATEMENT. This statement indicates that the worker clearly understands his or her duties regarding the operations in

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the SOP. The worker must review the SOP and sign the statement to be authorized to train or work under the SOP. A suggested Worker's Statement follows:

### WORKER'S STATEMENT

I have read this SOP and I have received the hazard control briefing. I understand them. I will follow this SOP unless I identify a hazard not addressed in it or encounter an operation I do not understand. If that occurs, I will stop this processing and notify my immediate supervisor of the problem.

Worker's Name	Date	Supervisor's Name	Date
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

4. STEP-BY-STEP PROCEDURES. Provide the worker with clear and concise step-by-step instructions for performing the process. The SOP shall be kept in the work area with the procedures readily available for the use of the worker performing the processing. SJPs, DMWRs, OPs, ISEA technical manuals and drawings, or other documents defining operations may be attached as this section of the SOP. The relevant sections must not contain extraneous instructions for processes not relevant to the SOP. The worker must not be required to leave the work station to locate other references nor jump haphazardly from section to section in order to perform the process safely and correctly. Documents which form part of the SOP must be reviewed during SOP development. Changes to these documents must be considered to be changes to the SOP. SOPs may contain technical instructions for which changes are expected to be routine (mix sheets, processing sheets, etc.). The SOP must document both the allowable variation limits and the process of approval for variations within the limits authorized by the SOP.

### 5. DIAGRAMS.

a. Building or Site Diagram. This is a diagram of the processing building or site showing the location of various safety-related items with respect to the work station. Safety-related items include fire extinguishers, fire suppression systems, eye wash stations, emergency showers, first aid kits,

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spill cleanup kits, ventilation systems or stations, emergency breathing devices, etc. Clearly illustrate explosive and personnel limits, evacuation routes and emergency exits. This information may be provided as posted fire bills or spill contingency plans. Posted information will be reviewed concurrently with the SOP.

b. Processing Diagram. This diagram includes information needed to clarify or amplify the information provided in the step-by-step procedures. Often this will take the form of a diagram using locally standardized symbols to indicate steps in the flow of materials through the various processing stages.

### 6. EQUIPMENT LISTS.

a. Processing Equipment List. Provide a list of all the approved tools, equipment, items and supplies (hand tools, power tools, gauges and meters, industrial machinery, industrial handling equipment, consumables, etc.) which are or may be used in the processing.

b. Safety Equipment List. Provide a list of all the safety equipment (including personal protective equipment) and systems which must be in place and working properly in order to protect the safety of personnel, equipment, facilities and the environment during the processing.

### 7. Hazards, Hazards Control and Hazard Control Briefings.

a. The SOP shall document all hazards and hazard control methods applicable to the process. This information shall form the basis for two types of hazard control briefings. The briefings shall be part of the SOP and records shall be maintained of each briefing conducted.

(1) Type I: All inclusive. Addresses the process and describes the hazards and control methods that the worker may encounter. Can involve video recordings, computer based instruction, and testing and is normally given off-line. Must be given prior to employee assignment as worker or trainee and is a prerequisite to personnel certification.

(2) Type II: Addresses the operation and work area. Describes the hazards and control methods that the worker will encounter. This "stand up" or refresher briefing may be on-line and is given monthly or when the SOP is changed.

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b. The SOP shall:

(1) List and explain the nature of each hazard and hazardous material which may be used, produced or encountered during the processing and which may have adverse impact on the worker, equipment, facility or environment. For hazardous materials used or consumed in the processing, life cycle information (raw materials, composition changes, end products, by-products and waste) must be included.

(2) List the measures required to avoid or minimize exposure to each hazard or hazardous material.

(3) List the symptoms which indicate unacceptable exposure of the worker, equipment, facility, or environment to each hazard or hazardous material.

(4) List the remedial actions required to relieve the immediate symptoms and restore the worker's health should exposure to an unacceptable hazard or hazardous material occur.

(5) List the actions required to decontaminate and restore the equipment and facility to a safe working condition should exposure to an unacceptable hazard or hazardous material occur. Where applicable, Material Safety Data Sheet (MSDS) information must be included in the SOP.

8. EMERGENCY RESPONSE AND CONTINGENCY PLANS. This provides the workers with the following information:

a. Lists each of the accidents or incidents (fire, spill, explosion, runaway reaction, release of hazardous vapors, mechanical failure, injury, etc.) which could occur during processing and which would require immediate action to control.

b. Lists a single point of contact that the worker should notify in case of each accident or incident.

c. Lists initial and follow-up actions that the worker should take in case of each accident or incident.

9. SECURITY. This provides the worker with all of the requirements necessary to maintain physical security, accountability, and disposition control of expendable ordnance and items and inherent components, hazardous materials, tools and equipment items. It also instructs the worker in measures to prevent unauthorized disclosure of classified information.

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### DEVELOPMENT AND CHANGE PROCEDURES

1. Development Procedures. SOPs are required for both recurring and non-recurring processes. Traceability to all developing, review and approval authorities, and source materials will be maintained.

a. Developer produces a draft SOP. The draft SOP is reviewed by all appropriate offices internal to the processing activity. While conducting these reviews, offices in the activity should seek technical advice from appropriate offices in outside activities (Navy Environmental Preventive Medical Unit, Centers of Excellence, Design Agent (DA), In-Service Engineering Agent (ISEA), Naval Safety Center (NAVSAFECEN), Technical Center for Explosives Safety, NAVORDSTA Indian Head, NAVSEACENPAC, NAVSEACENLANT, etc.). Outside activities may be requested to participate in process validation.

b. The CO of the processing activity exercises discretion regarding incorporation of the comments or recommendations of outside activities into the SOP and signs the SOP for use at the activity.

### 2. Change Procedures

a. Developer produces a proposed change to an SOP. Appropriate offices within the processing activity review the proposed change to the SOP. If necessary, appropriate offices in outside activities are consulted regarding the proposed change.

b. The CO of the processing activity signs the change to the SOP.

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**Enclosure 53.**  
**NASEA OP 5 SOP Requirement Section 2-1.1.**

NAVSEA OP 5 VOLUME 1 SEVENTH REVISION

**CHAPTER 2**

**GENERAL REQUIREMENTS, STANDARDS, AND PRACTICES**

**2-1. GENERAL SAFETY REGULATIONS.**

This chapter covers the basic safety requirements, standards, and practices to be observed when preparing, handling, storing, shipping, and treating ammunition, explosives, and related dangerous articles. Everyone working with or near any form of explosives should realize that explosives are dangerous and meant to explode, deflagrate, or burn vigorously. Even the latest insensitive explosives may detonate if subjected to imprudent or improper handling, causing considerable damage or loss of life. Analyses of ammunition and explosives accidents show that avoidable circumstances existed in nearly every instance when the cause of the accident could be determined. Complete understanding and strict observance of specified safety regulations are necessary to eliminate the unsafe acts and conditions that cause preventable accidents. Likewise, any repeated work, no matter how dangerous, can become routine and lead to carelessness. Therefore, constant employee attention and close supervision must be maintained to prevent accidents during operations that involve ammunition and explosives. The two most important considerations in handling ammunition and explosives are safety and responsibility. The individual performance of personnel shall never be evaluated on a competitive basis to a degree that would encourage shortcuts in safety procedures. The following safety regulations shall be observed by personnel involved in ammunition and explosives operations.

**2-1.1. WRITTEN OPERATING PROCEDURES.** All Department of the Navy (DON) shore activities shall develop written operating procedures prior to starting any operation involving ammunition or explosives. These procedures shall be officially documented and shall be approved by the installation commander. The written procedures shall ensure that each ammunition or explosives process complies with the technical requirements, explosives safety standards, personnel qualification and certification requirements, Navy Occupational Safety and Health (NAVOSH) standards, federal, state and local environmental requirements and security and physical security directives. In addition, development of procedures will ensure that activities clearly identify and minimize existing and potential hazards inherent in ammunition and explosives processing and, where necessary, develop, implement and rehearse emergency response, evacuation and contingency plans.

**2-1.1.1. Types of Written Operating Procedures.** NAVSEAINST 8023.11 (series) prescribes the guidance for writing Standard Operating Procedures (SOP) for applicable ammunition and explosive processes at shore activities. For ammunition or explosives processes not covered under NAVSEAINST 8023.11, other types of written operating procedures; that is, Maintenance Requirement Cards (MRC's), weapon loading checklists, Depot Maintenance Work Requests (DMWR's), and Standard Job Procedure (SJP's), are acceptable upon written approval from the installation commander.

2-1

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**NAVSEA OP-5 Vol. 1, 13-14.2. -13-15.3**

**NAVSEA OP 5 VOLUME 1 SEVENTH REVISION**

burning than normal blocks. Treatment of dynamite by detonation may be accomplished where the location will permit this method.

**13-14.2. TREATMENT OF DAMAGED/DETERIORATED/HAZARDOUS AIRCREW ESCAPE PROPULSION SYSTEMS (AEPS)/CARTRIDGE ACTUATED DEVICE (CAD) ITEMS.**

Treatment of AEPS and CAD items found in a hazardous, deteriorated, or damaged condition is the responsibility of EOD personnel. EOD personnel shall be notified as soon as an unsafe condition is discovered. Disassembly in order to render a device safe may be performed only by EOD personnel. At activities that manufacture these items disposition may be accomplished under an SOP. Pending disposition, such devices shall be separated from serviceable materials and clearly identified as damaged/unserviceable. Disposition of disassembled devices shall be requested from Naval Surface Warfare Center, Indian Head Maryland (Attn: Code 5320).

**13-15. SALE, SALVAGE, AND DISPOSITION OF INERT MATERIAL.**

The following paragraph describes requirements for the sale, salvage, and disposition of inert materials.

**13-15.1. GENERAL REQUIREMENTS.** All inert items intended for disposition, such as empty projectiles, cartridge cases, rocket warhead containers, and all inert materials shall be rigidly inspected for the presence of any explosive material prior to salvage, offer for sale, or delivery as a result of sale. All cavities of items submitted for sale shall be opened and thoroughly inspected. These cavities shall not be closed after the inspection. The commanding officer shall take all necessary precautions to assure that the items are inert. The local activity must certify items safe prior to release in accordance with DOD 4160.21-M and that the items have been properly demilitarized in accordance with DOD 4160.2-M-1.

**NOTE**

All containers that previously were used for ammunition, explosives, and dangerous articles shall be subjected to a 100% inspection prior to shipment to other activities for storage, reuse, or salvage. Such inspections shall both ensure that the containers are empty and determine whether the containers are serviceable and/or economically repairable before shipment. All previous markings from empty containers must be removed. See paragraph 11-1.4.

**13-15.2. INERT-LOADED AMMUNITION.** Inert-loaded ammunition shall be completely disassembled. All tracer composition, if present, shall be removed prior to sale or other disposition of inert-loaded ammunition as scrap.

**13-15.3. CARTRIDGE CASES.** Cartridge cases shall be deprimed by positive methods and inspected prior to disposition as scrap. Expended small-arms cartridges cases, including 25 mm and 30 mm need not be deprimed. Refer to appendix A for definition of small-arms ammunition.

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DEPARTMENT OF THE NAVY  
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IHDIVNAVSURFWARCENINST 8020.4 CH-1  
Code: 11

10 MAR 1998

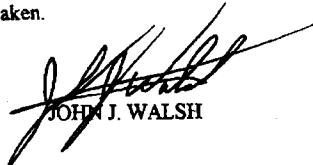
**IHDIVNAVSURFWARCEN INSTRUCTION 8020.4 CHANGE TRANSMITTAL 1**

From: Commander

Subj: REGULATIONS GOVERNING RECEIPT AND DISPOSAL OF  
DECONTAMINATED SCRAP MATERIALS PROCESSED THROUGH  
THE PROPERTY DISPOSAL OFFICE

Encl: (1) Sample Designation Letter pages 1 & 2

1. Purpose. To issue change 1 of basic instruction.
2. Action. Remove pages 1 and 2 and replace with enclosure (1).
3. Cancellation. When above action has been taken.

  
JOHN J. WALSH

Distribution:  
List "X2:

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Code: ..... 11

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### IHDIVNAVSURFWARCEN INSTRUCTION 8020.4

From: Commander

Subj: REGULATIONS GOVERNING RECEIPT AND DISPOSAL OF  
DECONTAMINATED SCRAP MATERIALS PROCESSED THROUGH THE  
PROPERTY DISPOSAL OFFICE

Ref: (a) OP-5  
(b) DOD4160.21-M-1  
(c) TWO-010-AC-ORD-0

Encl: (1) Sample Designation Letter  
(2) Definition of 3X and 5X Contamination Levels

1. Purpose: To issue regulations governing receipt, certification as safe and disposal of explosive scrap materials decontaminated at Indian Head Division, Naval Surface Warfare Center (IHDIV, NSWC), in accordance with references (a), (b), and (c).

2. Background: Trace explosive contaminated scrap material such as metals, woods, and plastic are decontaminated at the Caffee Road Thermal decontamination point and the solid waste recycle (SWR) building. After decontamination, scrap metal materials are demilitarized, if required, and turned into the Property Disposal Office (PDO) for removal, and disposal. All of the inert scrap metals processed will be sold in open markets to off site contractors through DRMO procedures.

3. Policy: To insure that all materials are properly decontaminated before turnover to the PDO and that signature certifications on the documents verify that the scrap materials are safe upon receipt.

4. Procedures:

a. Signature certifications verify that the explosive scrap materials ready for transfer to PDO were properly decontaminated. An example would be when explosives do not come in contact with the container and there are no visible signs of contamination.

b. Empty containers must be opened, certified as safe, visually inspected as empty, sealed with traceable numbered seals, and all markings obliterated prior to turn into PDO.

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c. Enclosure (1) will be used to reflect names and signatures of those personnel authorized as inspectors and certification officials by the Commander. These selected personnel validate that the material is inert and certify the safety of decontaminated explosive materials ready for turn into PDO. This material will be eventually transferred to private scrap metal removal contractors. The Commander will reissue this letter to reflect current names of safety inspectors and certification officials when identified by the PDO, Safety or Ordnance officials.

d. When explosive scrap materials are decontaminated, members of the Safety Department, Code 04, or Solid Waste Recycle (SWR) personnel (Code 20) will issue and sign form NDW-NAVORDSTA 4035/30 "Explosive Decontamination Tag-Safe" declaring the item (s) as being inert and containing nothing of a dangerous nature.

e. Members of the PDO will act as certifying officials to insure the signatures on DD Form 1348-1 and NDW-NAVORDSTA 4035/30 are valid, as reflected on an official copy of enclosure (1).

f. The NDW-NAVORDSTA 4035/30 tag and completed copies of DD Forms 1348-1 will remain on file at the PDO (bldg 266) Naval Surface Warfare Center, Indian Head Maryland for audit trail, research and inspection purposes.

5. Demilitarization: When applicable, some surplus military material may require demilitarization. When this occurs, provisions of reference (b) apply to the demilitarization process. The PDO will assist when requested. A statement by the generator will document how the material was demilitarized. The statement will be typed on DD Forms 1348-1 and will accompany the excess removal documentation. The statement reads as follows:

"I certify that ( Identify Items) were demilitarized in accordance with (cite instructions, appendix and item number) that were complied with in the DOD 4160.21-M-1 and other applicable regulations)."

6. Inert Material: Turn in of inert material documentation also requires the following certification statement: "I certify that the items listed hereon have been inspected by me and to the best of my knowledge and belief, contain no items of a dangerous or hazardous nature." In addition, a copy of appendix 10-A of the safety manual will be marked with the inert serial number and will accompany the inert material to the PDO holding area. PDO personnel will insure that the inert items are safeguarded and not pilfered. Trace explosive contaminated materials processed at the Caffee Road Decontamination Point will be assigned a 3x decontamination level code. Material



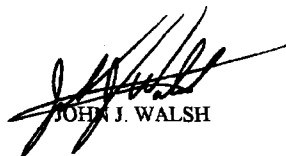
## Enclosure 55. IHDIVNAVSURFWARCENINST 8020.4 Ch. 1

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processed through the solid waste recycler will be assigned a 5x decontamination level. Both levels of certification will be accepted by the PDO for removal and proper disposal. See definitions in enclosure (2).

7. Action: All IHDIVNAVSURFWARCEN and tenant activity personnel responsible for the decontamination, certification, inspection and removal of subsequent scrap materials shall ensure the provisions of this instruction are followed.



JOHN J. WALSH

Distribution:  
List "X2"

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MAR 10 1998

SAMPLE DESIGNATION LETTER

8020  
Ser 041A6/07

From: Commander, Indian Head Division, Naval Surface Warfare Center  
To: Chief, Defense Reutilization and Marketing Office  
P.O. Box 388, Ft. Meade, MD 20755-0388

Subj: AMMUNITION DEMIL AND DISPOSAL OPERATIONS

Ref: (a) PHONCON IHDIVNAVSURFWARCEN (Code 041A6) K. Bonnin/DRMO  
Sue Arteche of 16 Apr 97

1. As requested in reference (a), the following personnel are designated as safety inspectors and certification officers for munition list items and equipment declared inert by this Activity.
2. Members of the Safety Department, Code 04, and Solid Waste Recycle (SWR), Code 20 will issue a Form NDW-NAVORDSTA 4035/30, "Explosives Decontamination Tag-Safe," declaring the item(s) as being inert and containing nothing of a dangerous nature. The 4035/30 will bear the signature of one of the following personnel:

Al Brooker \_\_\_\_\_

Michael Olup \_\_\_\_\_

Roderick Spruill \_\_\_\_\_

Thomas Woodland \_\_\_\_\_

Silas Williamson \_\_\_\_\_

3. Members of the Property Disposal Office, (PDO), who will be the certifying official whose signature will appear on the DoD Form 1348-1 excess document, are as follows:

John W. Harley \_\_\_\_\_

Joseph Minter \_\_\_\_\_

Edward L. Jackson \_\_\_\_\_

Encl (1)

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Subj: AMMUNITION DEMIL AND DISPOSAL OPERATIONS

4. The NDW-NAVORDSTA Form 4035/30 will remain on file at the Property Disposal Office, Building 266, at the Naval Surface Warfare Center, Indian Head, MD. The original and three copies of the 1348-1 will accompany the item of excess to the Defense Reutilization and Marketing Office at Ft. Meade, MD.

5. The above personnel are authorized for the period of Fiscal Year 1998.

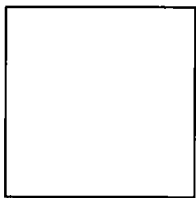
6. If there are any questions or comments, please contact Karen Bonnin, Code 041A6, on DSN 354-4383 or Commercial (301) 743-4383.

JOHN J. WALSH

Encl (1)

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**Enclosure 56**  
**IHDIVNAVSURFWARCENINST 8023.4**



DEPARTMENT OF THE NAVY  
INDIAN HEAD DIVISION  
NAVAL SURFACE WARFARE CENTER  
101 STRAUSS AVE  
INDIAN HEAD MD 20640-5035

IHDIVNAVSURFWARCENINST 8023.4B  
Code 04

05 AUG 2002

**IHDIVNAVSURFWARCEN INSTRUCTION 8023.4B**

**From:** Commander

**Subj:** SUBMISSION, REVISION, MAINTENANCE, AND OPERATIONAL REQUIREMENTS OF  
STANDARD OPERATING PROCEDURES (SOP) AND ENGINEERING  
PROCEDURES (EP)

**Ref:** (a) NAVSEAINST 8023.11  
(b) NAVSEA OP 5  
(c) NAVSURFWARCENINST 8020.5  
(d) NAVSURFWARCENINST 5100.22

**Encl:** (1) Definitions  
(2) Review Team Analysis Form 8023/2  
(3) Process Supervisor's Statement Form 8023/5  
(4) Worker's Statement Form 8023/4  
(5) Approval and Control for Code 240 SOPs  
(6) Format and Content  
(7) SOP Approval Form 8023/1  
(8) Receipt of Control SOP Form 8023/6  
(9) Engineering Procedure Approval Form 8023/3

1. **Purpose.** To provide instructions for preparation, submission, change, maintenance, operational use, and approval of Standard Operating Procedures (SOPs) and Engineering Procedures (EPs) per reference (a) for the processing of ammunition and explosives (A&E) and/or other hazardous processes as deemed appropriate.

2. **Cancellation.** IHDIVNAVSURFWARCENINST 8023.4A. Changes are not indicated due to major revision.

3. **Action.** All appropriate personnel will thoroughly familiarize themselves with this instruction. Supervisors will ensure that all personnel under their supervision who need to be part of the SOP and EP processes are following the provisions of this instruction.

This instruction replaces Lead Operator and Operator with Team Leader and In-training with Team Member for all existing SOPs. Existing SOPs that reference certification levels shall be addressed on a case-by-case basis to prevent confusion or misunderstanding.

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4. **Scope.** Reference (b) requires that all naval activities develop written procedures prior to starting any operation involving A&E. This instruction provides a standard for writing SOPs. SOPs are not intended to substitute for Ordnance Pamphlets (OP) or other technical documentation, but to encompass that documentation and provide direction, specific to the site where the operations are performed which allows the process to be safely accomplished. An SOP may be written to allow for changes within the process as long as the safety and the technical requirements of the process are accomplished. This instruction applies at the Indian Head Division, Naval Surface Warfare Center (IHDIVNAVSURFWARCEN) and other activities when operations involving A&E are performed by IHDIVNAVSURFWARCEN personnel. Personnel shall be properly certified per reference (c) prior to using any SOP for an A&E process. This instruction applies whether the work is performed by Navy or contractor personnel and includes all operations involving A&E.

The following processes are **exempt** from the specific provisions of this instruction but remain subject to the requirements of reference (b).

- a. Emergency explosive ordnance disposal performed by EOD personnel.
- b. Expendable ordnance processing performed by the operating forces aboard ship.
- c. Deployed afield or performed at the squadron level aboard Naval or Marine Corps air stations.

5. **Definition of Terms.** Enclosure (1) lists definitions of terms used in this instruction.

6. **Policy.** All A&E processes shall be conducted in the safest manner possible. Each process shall comply with the technical requirements, explosive safety standards, Navy Occupational Safety and Health (NAVOSH) standards, federal, state, and local environmental protection requirements, and security and physical security directives. Existing and potential hazards inherent in processing A&E must be clearly identified and minimized. Emergency response, evacuation, and contingency plans associated with A&E processing must be developed, implemented, and rehearsed where necessary. The SOP is the **required** document by which IHDIVNAVSURFWARCEN will integrate these various items for the workers conducting the process. Organizations performing A&E operations will do the following:

- a. Prepare SOPs for all handling, manufacturing, research, development, and test and evaluation processes involving A&E.
- b. For processes not involving A&E, the initiating division director/branch manager in consultation with the Safety Department (Code 04) will determine when SOPs are required.
- c. Validate all SOPs. All validations shall be documented. If possible, inert material shall be used for validations. Validations are required for new A&E processes and will be conducted by the Process Review Board (PRB) or Safety Review Committee (SRC) per section 4.7 of reference (d). PRB/SRC minutes document that these validations were conducted. SOPs that are not significantly different to warrant a PRB or SRC do not require a new validation but are validated during the SOP approval process by similarity to other operations. The review/monitor process that all active SOPs must undergo

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annually also fulfills the requirements for SOP validation. Review Team Analysis (RTA) forms document SOP validation.

d. Department head approval is required before any SOP can be released to an outside activity/company. Each SOP released off-station shall be stamped in red "For Information Only—Not To Be Used For Manufacture Or Process."

**7. Responsibilities**

**a. Commander**

- (1) Responsible for development, validation, approval, review, and use of SOPs for processing A&E at this activity.
- (2) Ensures compliance with higher-level guidance and proper implementation of instruction.
- (3) Approves all SOPs and changes to SOPs. This authority is delegated to the department head level by this instruction.

**b. Department Heads**

- (1) Review and approve SOPs and EPs as needed for the Commander. The department head may not further delegate this authority. During the absence of the department head, the person designated to act in the position may sign SOP.
- (2) Ensure that SOPs and supplementary documentation necessary to cover all operations performed in the department are prepared and approved.
- (3) Make decision on providing an SOP to another activity/company.

**c. Division Directors or Deputy Department Heads**

- (1) Ensure that operations involving A&E are performed according to a valid SOP by personnel certified per reference (c).
- (2) Review SOPs for technical requirements; explosives safety standards; NAVOSH safety standards; federal, state, and local environmental protection standards; security and physical security directives; and other factors as needed.
- (3) Review new and changed SOPs during the approval process. Ensure SOPs are in the proper format and include all the requirements necessary to satisfy this instruction and reference (a). Sign to signify concurrence and forward to Safety Department (Code 04) for approval, prior to department head approval.

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(4) Determine, in consultation with Code 04, when SOPs are required for non-A&E hazardous operations.

(5) Ensure active SOPs are reviewed and at least 25 percent of ongoing operations are monitored yearly. Report results on Review Team Analysis Form 8023/2 (RTA form) (enclosure (2)) to Publications (Code 073).

(6) Prepare supplementary documents needed to make a quality product, safely and efficiently.

(7) Ensure Type II hazard control briefings (HCB) are developed and presented, and that attendance is documented and retained for 5 years.

(8) Approve RTAs and/or initiate action resulting from RTA.

(9) Initiate appropriate actions resulting from SOP monitoring, review, SRC, PRB, investigations, or inspections.

(10) Ensure that SOPs are validated.

(11) Shutdown operations if result of SOP review/monitor reveals a safety related problem or the procedure should be changed or modified to properly cover the operation.

(12) Ensure handwritten approved SOPs are handcarried to Publications (Code 073). Under no circumstances shall the marked-up original SOP be used to perform an operation.

**d. Process Supervisor**

(1) Sign the Process Supervisor's Statement Form 8023/5, enclosure (3) and Supervisor's Validation on Worker's Statement Form 8023/4, enclosure (4), for each active SOP in the work area. **Existing process supervisors statements and workers statement forms in active SOPs will be replaced with enclosures (3) and (4) within 90 days of the date of this instruction.**

(2) Conduct an annual review of all active SOPs under their cognizance.

(3) Ensure that operations are conducted with valid approved and accurate SOPs.

**c. Information Technology Division (Code 053).** Maintain the SOP database and modify database as requested by Code 073.

**f. Publications (Code 073)**

(1) Administers the development, editing, distribution, and control program for SOPs at the activity.



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- (a) Provides SOP serial numbers and assigns change numbers.
- (b) Reviews procedures for proper format and edits copy (edits only the changes in MPCs).
- (c) Specifies and communicates format requirements within the guidance of this instruction to ensure consistency.
- (d) Prepares the typed master.
- (e) Prepares affected pages; indicating in the margin which steps were changed by a vertical line, and issues document.
- (f) Uses a list of affected pages and issues change pages for all copies if it is necessary for time and efficiency.
- (g) Reproduces and distributes approved/controlled SOPs.
- (h) Maintains a file of the last handwritten approved original. Maintains a signature log of all SOPs picked up for review or distribution. Documents that all controlled, inactive, and/or superseded SOPs are returned. Notifies divisions of discrepancies.
- (i) Permanently maintains historical files of all typed copies of SOPs.

- (2) Provides SOP serial numbers, guidance, consultation, and database entry for detachments.
- (3) Updates the Personnel Certification System (PCS) database under the control of Code 053 to reflect current information on SOPs.

- (4) Keeps files on all current RTAs.

**g. Safety Department (Code 04)**

- (1) Reviews all new SOPs, changes, and EPs, to ensure all environmental, industrial, and explosive safety criteria are met and safety rules and regulations are consistent. Reviews MPCs when requested.
- (2) Administers Hazardous Material Abstract (HMA) system: provides serial numbers, writes and approves abstracts, maintains permanent files of approved abstracts, and supplies abstracts as needed for the SOP program. Provides HMAs when requested.
- (3) Maintains up-to-date summaries of building explosive and personnel limits.

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(4) Maintains the activity's master Material Safety Data Sheet (MSDS) file and database on all hazardous materials.

(5) Signs SOPs and EPs signifying concurrence.

(6) Controls this instruction.

(7) Establishes overall SOP Program policy to comply with higher-level guidance.

**h. Workers (SOP Qualified)**

(1) Read and follow requirements of the SOP.

(2) Sign Workers Statement Form 8023/4, enclosure (4).

(3) Observe all general safety rules and precautions pertaining to the work area.

(4) Stop operations and notify supervisor of any situation that is not addressed in SOP or cannot be understood.

**i. Detachments**

(1) Detachments shall follow the SOP requirements in enclosure (5).

(2) Implement and follow the requirements of the host agreement for SOP requirements.

**8. Format and Content.** Enclosure (6) provides direction concerning required content and format of SOPs and EPs. SOPs are to be kept in work areas for workers to use. To minimize the bulk of the SOP, management information (time studies, productivity standards, program objectives, etc.) **shall not** be part of, or appended to, SOPs. These documents should be developed when appropriate, but filed elsewhere.

**9. Monitoring and Reviewing SOPs**

a. Active SOPs that have not completed a full change within the past year shall be reviewed or monitored annually. The review date is 1 year from the approval date of the SOP or the date the last SOP review or monitoring was approved. **Note: MPCs do not change the cyclic review date.**

b. Process Supervisors will sign the RTA form when the annual review is completed.

c. SOPs shall be reviewed whenever there is a change to a source document.

d. The initiating division director shall review his operating schedules and determine which operations to have monitored by the review team. Make every effort to monitor SOPs and ensure SOPs

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that cannot be monitored are reviewed as scheduled. The annual goal for monitoring is at least 25 percent of all active SOPs.

e. The review/monitoring of SOPs shall be documented with a properly signed and dated copy of the Review Team Analysis Form 8023/2, enclosure (2). **Note: Completion of this form does not initiate a change to SOP.**

f. The division director shall either approve the RTA form, certifying the review/monitoring has been made and the SOP has been found correct for use, or initiate appropriate action resulting from the RTA. Unless the initiating division director deems otherwise for reasons of safety, etc., the existing SOP will continue in effect as the official procedure until an approved, superseding SOP is received.

g. The **approved original** of the RTA form shall be sent to Publications (Code 073) for filing and incorporation into the PCS database.

h. Publications shall review RTA Form 8023/2 and transfer data to update the PCS database to monitor and effectively control SOPs.

**10. SOP Change Procedures.** There are two methods that can be used to make modifications to SOPs—a full change or a minor procedure change (MPC).

a. The full change process must be used when:

- (1) An operation is relocated.
- (2) A new process is introduced.
- (3) New types of physical or chemical actions are applied to the energetic material.
- (4) Explosive and personnel limits are changed.

(5) Changes to existing processes will increase or change the content of air emissions, wastewater discharges, and/or waste.

The MPC change process can be used to modify SOPs for all other situations.

b. To prepare changes, use the following processes:

- (1) Obtain an SOP Approval Form 8023/1, enclosure (7), and indicate if a full change or a minor change is being initiated
- (2) Obtain a copy of the current SOP from Publications or ihmdnce/SOP website.
- (3) Ensure a current revision of the SOP is not already in the system for a change or an MPC.

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- (4) Describe the nature of the change on the SOP Operating Procedure Change page.
- (5) Write or type corrected instructions above struck-out statements; or if space is lacking, attach a piece of paper with only the new changes listed.
- (6) Take new SOPs and full changes to Publications (Code 073) for editing. An MPC may be sent through the review cycle before editing, if desired.
- (7) Obtain approval signatures and dates as defined in paragraph 10 of this instruction.

**11. SOP Approval Process**

a. Submit all new procedures and changes for approval and signature. Each person shall initial changes made during the approval cycle. As a minimum and in the order listed below, the individuals shall approve SOPs and sign signifying concurrence:

- (1) Division Director
- (2) Safety Department (04, 041, or 042)
- (3) Department Head

For MPCs, Safety Department approval is not required.

b. Safety Department shall be advised during the approval process of the need to use a handwritten copy of the SOP. A request to use a handwritten copy shall be made in writing by the respective department head on the SOP approval sheet and dated. Approval to use a handwritten copy for up to 2 weeks shall be granted by Code 04 or 041. A duplicate copy of the signed handwritten procedure shall be used in the work area.

c. Handcarry handwritten copy to Publications (Code 073) for preparation of typed master. **Under no circumstances shall the marked-up original SOP be used to perform an operation.**

**12. Distribution and Control**

a. After SOP approval, Publications (Code 073) shall:

- (1) Conduct administrative review to ensure proper format. (editing, if not seen before review)
- (2) Prepare final SOP.
- (3) Reproduce SOP.
- (4) Control and distribute SOP.
- (5) Retain the current complete signed procedure.
- (6) Maintain a document control file to ensure currency of procedure in use.

b. The Operating Areas Monitoring SOPs shall:

- (1) Distribute controlled copies. When new controlled copies are received, return the SOP Approval Form 8023/1, enclosure (7), of the previous change to Publications (Code 073) with the

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Receipt of Control SOP Form 8023/1, enclosure (8). Ensure only controlled copies are used for operations.

- (2) Maintain records of distributed control copies of SOPs.
- (3) Maintain records of EPs and enforce and control the duration of EPs and SOPs that have been granted handwritten approval.
- (4) Maintain Type II HCBs and records of each briefing conducted for Type II HCBs for 5 years **per reference (d)**.
- (5) Ensure the monthly status (SOPs Requiring Action) is reviewed and appropriate action taken.
- (6) Ensure SOP Approval Form 8023/1, enclosure (7), of inactive SOPs (made inactive or past due made inactive), are returned to Publications (Code 073) with RTA forms.
- (7) Ensure all inactive SOPs are removed from the work area.

c. The SOP Approval Form 8023/1, enclosure (7), with typed signatures, shall be the first page of the procedure issued for actual operational use.

13. **Resubmission of SOPs.** SOPs expire exactly 4 years from the last date of approval. The initiating division director shall submit all active SOPs through the normal approval process per paragraph 10 at least once every 4 years.

**14. Inactive SOPs**

- a. The initiating division director may deactivate an SOP by using an RTA form.
- b. To reactivate an SOP, deactivated less than 4 years, the initiating division shall review the SOP for correctness. If there are no changes the division director shall complete an RTA form and send to Publications (Code 073) to receive new controlled copies. If over 4 years or if there are changes, process and circulate the SOP for approval per paragraph 10 of this instruction.
- c. When an SOP is not reviewed by its review date, it will automatically revert to inactive (delinquent review) status effective the end of that month.
- d. No operations will be conducted using an inactive SOP.

**15. Hazards, Hazards Control, and Hazard Control Briefings (HCB)**

- a. The SOP shall document all hazards and hazard control methods applicable to the process. This information shall form the basis for a hazard control briefing called Type II HCBs. Records shall be maintained of each briefing conducted and maintained for 5 years. The HCBs are given

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- (1) Prior to the start of a new operation.
- (2) Monthly for on-going operations.
- (3) When the SOP is changed.

b. Type II HCBs are required to assure that personnel assigned to explosives and other hazardous processes/operations are informed of the safety requirements, explosives and other hazards, and their responsibilities for explosives and occupational safety. It describes the hazards and control methods the worker will encounter and that it is a required part of the SOP.

c. The Type II HCB "stand-up" or refresher briefing shall

- (1) List and explain the nature of each hazard and hazardous material which may be used, produced, or encountered during the processing and which may have adverse impact on the worker, equipment, facility, or environment.

- (2) List the measures required to avoid or minimize exposure to each hazard or hazardous material.

- (3) List the symptoms that indicate unacceptable exposure of the worker, equipment, facility, or environment to each hazard or hazardous material.

- (4) List the remedial actions required to relieve the immediate symptoms and restore the worker's health, should exposure to an unacceptable hazard or hazardous material occur.

- (5) List the actions required to decontaminate and restore the equipment and facility to a safe working condition, should exposure to an unacceptable hazard or hazardous material occur. Where applicable, Material Safety Data Sheet (MSDS) information must be included in the HCB.

**16. Engineering Procedures**

a. EPs are used to verify that a proposed process or change is technically feasible and produces desired results before it is incorporated into an SOP or to provide a procedure for variations on operations/programs that are not anticipated to be repeated.

b. EPs must meet the same requirements as an SOP for content and format. The Engineering Approval Form 8023/3, enclosure (9), shall be used as the approval sheet. EPs will be prepared by the initiating division and approved per paragraph 10.

c. EPs are approved for a specific time frame or within a time frame. Approval duration/coverage must be stated on enclosure (9) (maximum of 1 year).

d. Where applicable, active SOPs may be referenced in the EP.

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e. Supervisors and operators will sign new statements, enclosures (3) and (4), to accompany the EP when used.

f. The operation divisions will maintain the control and distribution of EPs. The original approved EP shall be the file copy. A copy of the original approved EP shall be used for processing and kept on file in the originating department for at least 1 year or destroyed on SOP conversion.

g. An EP can be converted to an SOP without review if no further changes are required and the originating department has written approval from Code 04 or 041. If the EP has been changed from its original approved form it must be reviewed and approved per paragraph 10 of this instruction for conversion to an SOP.

h. Numbering of EPs is established within each operating division.

i. Operating divisions shall establish and maintain processes that will ensure only current, approved EPs are used for operations.

  
MARC A. SIEDBAND

Distribution:  
Department Heads  
Command Staff Offices  
Division Directors  
Branch Managers  
Department, Command, Division, and Branch Secretaries  
NIS

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**DEFINITIONS**

**Caution** — A caution shall be inserted in the text immediately prior to the step in a procedure, if not strictly followed, could result in damage to or destruction of equipment.

**Certification** — The formal documented declaration by a QUAL/CERT Board Chairperson that an individual has met all of the qualification requirements to participate in A&E processes within a certification area.

**Engineering Procedure (EP)** — A document used to verify that a process is feasible and provides step-by-step instructions for conducting safe, nonrecurring operations on ordnance or ordnance components.

**First Assigned Process Responsibility** — When a new SOP or an existing SOP that has undergone a revision and is assigned to the process supervisor for use in the work area. Signing the Process Supervisor statement documents this event.

**Hazardous Material** — A hazardous material is any material that is a physical or health hazard if used or stored improperly.

**Inert Operation** — An inert operation is one that does not involve Ammunition and Explosives (A&E). It may involve other hazardous materials.

**List of Effective Pages (LOEP)** — The LOEP lists the pages changed due to a change.

**Minor Procedure Change (MPC)** — A method of instituting a minor change to an SOP so the operation can continue with a valid SOP with the least delay.

**Monitor** — A designated monitoring team or individual observes the operation step-by-step and reads and discusses the SOP with the operators to ensure they can and do follow the SOP exactly and to recommend changes when applicable.

**Note** — A note shall be confined solely for use in narrative or illustrative nonprocedural data. Notes shall not be used to provide direction or in lieu of procedural steps. Notes shall not be used in lieu of warnings or cautions and are placed either before or after each applicable step, depending on the situation.

**Operating Division Representative** — The process supervisor who performs the annual review of the SOP.

**Physical Security** — Physical security is the use of security measures and physical devices to protect assets from theft, sabotage, and destruction. In SOPs the emphasis is on lock and key, accountability, and inventory.

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**Process Explosive and Personnel Limits** — Limits for the building, bay or area when the process is being conducted.

**Process Supervisor Validation Statement** — This statement on the Worker's Statement Form 8023/4 is signed by the process supervisor after the worker signs the workers' statement. This signature signifies the process supervisor has assigned only in-training or qualified individuals who have read and understood the requirements (to be able to follow under direct supervision for in-training individuals and to be able to perform operations independently for qualified individuals).

**Qualification** — A requirement that personnel must meet before they can be certified to perform a task with A&E in a certification area.

**Review** — A designated review team or individual reads and discusses the SOP without actual on-site observation of the operation itself and recommends changes when applicable.

**SOP In-Training** — A formal documented declaration (signing Form 8023/4) by a Process Supervisor and TM certified individual, that the individual has received and understood the hazards that they will be exposed to when performing the operations covered by the SOP. They have read the SOP and will follow the SOP while under direct supervision.

**SOP Qualified** — The formal documented declaration (signing of Form 8023/4) by a Process Supervisor and TL certified individual that has received and understood the hazards that they will be exposed to, has read the SOP and demonstrated the ability to perform the tasks outlined in the SOP. An individual can only be qualified to a SOP if they are at the TL certification level for that particular certification area.

**Source Documents** — A source document contains procedures that have either been incorporated into the SOP as the approved method for accomplishing a specific ordnance related task or refers the user of the SOP to the source document for the step-by-step procedures on how to accomplish the explosives — or ordnance-related task. Examples; ordnance pamphlets, technical manuals, specifications, drawings, etc.

**Standard Operating Procedure (SOP)** — A required document that Indian Head provides to the worker with detailed step-by-step instructions for conducting safe processing of A&E. The SOP integrates the technical requirements; explosive safety standards; NAVOSH standards; federal, State, and local environmental protection standards; security and physical security directives; and other factors as determined by NSWC Indian Head.

**Supplementary Document** — A document that provides written processing records of how a lot, batch, quantity, or number of units were processed, manufactured, or tested. Used in conjunction with, but not in lieu of, an SOP. Examples: test firing sheets, shop travelers, mix sheets, work review forms (WRF), laboratory review forms (LRF), etc.

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(4) Determine, in consultation with Code 04, when SOPs are required for non-A&E hazardous operations.

(5) Ensure active SOPs are reviewed and at least 25 percent of ongoing operations are monitored yearly. Report results on Review Team Analysis Form 8023/2 (RTA form) (enclosure (2)) to Publications (Code 073).

(6) Prepare supplementary documents needed to make a quality product, safely and efficiently.

(7) Ensure Type II hazard control briefings (HCB) are developed and presented, and that attendance is documented and retained for 5 years.

(8) Approve RTAs and/or initiate action resulting from RTA.

(9) Initiate appropriate actions resulting from SOP monitoring, review, SRC, PRB, investigations, or inspections.

(10) Ensure that SOPs are validated.

(11) Shutdown operations if result of SOP review/monitor reveals a safety related problem or the procedure should be changed or modified to properly cover the operation.

(12) Ensure handwritten approved SOPs are handcarried to Publications (Code 073). Under no circumstances shall the marked-up original SOP be used to perform an operation.

**d. Process Supervisor**

(1) Sign the Process Supervisor's Statement Form 8023/5, enclosure (3) and Supervisor's Validation on Worker's Statement Form 8023/4, enclosure (4), for each active SOP in the work area. **Existing process supervisors statements and workers statement forms in active SOPs will be replaced with enclosures (3) and (4) within 90 days of the date of this instruction.**

(2) Conduct an annual review of all active SOPs under their cognizance.

(3) Ensure that operations are conducted with valid approved and accurate SOPs.

**c. Information Technology Division (Code 053).** Maintain the SOP database and modify database as requested by Code 073.

**f. Publications (Code 073)**

(1) Administers the development, editing, distribution, and control program for SOPs at the activity.

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REVIEW TEAM ANALYSIS  
NDW-IHDIVNAVSURFWARCEN 8023/2 (Rev. 6-02)

☒ REVIEW

☐ RESUBMIT

DOCUMENT NO.	CHANGE NO.	DATE SCHEDULED FOR REVIEW/MONITOR	DATE ACTUALLY REVIEWED/MONITORED
PROCESS OR OPERATION		PRODUCT OR PROGRAM	
TYPE OF DOCUMENT <input checked="" type="checkbox"/> SOP <input type="checkbox"/> OTHER		ACTION <input type="checkbox"/> REVIEW <input type="checkbox"/> MONITOR	

GENERAL COMMENTS:

NOTE: REVIEW IS ALSO DUE ON ALL SUPPORTING DOCUMENTATION (See Reverse Side)

CONDITIONS OF

<input type="checkbox"/> FACILITIES	<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> GOOD	<input type="checkbox"/> FAIR	<input type="checkbox"/> POOR
<input type="checkbox"/> EQUIPMENT	<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> GOOD	<input type="checkbox"/> FAIR	<input type="checkbox"/> POOR
<input type="checkbox"/> TOOLS	<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> GOOD	<input type="checkbox"/> FAIR	<input type="checkbox"/> POOR

COMMENTS:

WERE OPERATORS USING THE LATEST PROCEDURE?	WERE INSTRUCTIONS IN PROCEDURE PROPERLY FOLLOWED?
OPERATING DIVISION DIRECTOR'S COMMENTS	REVIEW TEAM (Signatures)
	TECHNICAL REPRESENTATIVE      DATE
	OPERATING DIVISION REPRESENTATIVE      DATE
	SUPPORTING DOCUMENTATION REVIEWED (Signatures)
	TECHNICAL REPRESENTATIVE      DATE
APPROVED BY (Division Director signature)      DATE	OPERATING DIVISION REPRESENTATIVE      DATE

SEND THIS REVIEW TEAM ANALYSIS TO CODE 073 WHEN COMPLETED TO UPDATE STATUS.

OVER

Enclosure (2)





**IHDIVNAVSWARFARCENINST 8023.4**

IHDIVNAV SURFWARCEN NST 8023.4B

05 AUG 2007

**WORKER'S STATEMENT**

NDW-IHDIIVNAVSURFWARREN Form 8023/4 (Rev. 6-02)

**TM CERTIFIED WORKER'S STATEMENT**

I have read this SOP and have a basic understanding of it, or specific sections of it, and I have received the HCB and understand the hazards of this operation. I will follow this SOP while under direct supervision of the process supervisor or other TL certified individual. If I encounter a situation that I do not understand I will stop this processing and notify the process supervisor of the problem.

SOP NO.

CHANGE NO.

**TL CERTIFIED WORKER'S STATEMENT**

I have read this SOP and I have received the hazard control briefing. I understand them. I will follow this SOP unless I identify a hazard or operation not addressed in it. If that occurs, I will stop this processing and notify my immediate supervisor of the problem.

### PROCESS SUPERVISOR'S VALIDATION STATEMENT

I have made sure all persons assigned to this process are qualified, have read and understand the requirements of this SOP, and have signed the worker's statement for this process.

[illegible]

**Enclosure (4)**

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**IHDIVNAVSURFWARCENINST 8023.4**

IHDIVNAVSURFWARCENINST 8023.4B

05 APR 2009

**APPROVAL AND CONTROL FOR CODE 240 SOPs**

1. Submit Standard Operating Procedure for review, approval, signature, and dating in the order listed below. Each person will initial changes made during the approval cycle.

a. Project Engineering Branch Manager – Obtain number assignment for SOP from the Publications Branch (Code 073) who records the number. Review, correct, and sign to indicate concurrence with the procedure.

b. Operations Branch Manager – Review, correct, and sign to indicate concurrence with the procedure.

c. Special Assistant, Senior Explosives Chemistry Technologist (Code 240D) – Review for compliance with environmental regulations.

d. NAVWPNSTA Security (Code 101) – Review and approve those procedures pertaining to magazine security indicating compliance with OPNAVINST 5530.13, Chapter VI.

e. Head, NAVWPNSTA Environmental Directorate (Code 09E) – Review and approve SOP for compliance with environmental criteria.

f. Head, NAVWPNSTA Safety Department (Code 04) – Review and approve SOP for compliance with OSH and explosive safety criteria.

g. Project Engineering Branch Manager – Make a final review of changes to procedures before forwarding to Division Director for approval.

h. Head, NSWC Safety Department (Code 04) – Review and approve all new SOPs for compliance with OSH and explosive safety criteria. Changes and MPCs do not require NSWC Safety (Code 04) review.

i. Division Director – Review and approve SOP overall for the department and Commander.

2. The requirements given in paragraph 7, sections b through f of this instruction apply with the following exceptions:

a. Code 073 will issue a block of SOP numbers to Code 240. Code 240 will be responsible for all other Code 073 functions including typing, editing, distribution, maintaining original files, and controlling Code 240 SOPs. Code 240 will send a copy of all SOPs to Code 073 for file.

b. References to Code 04 mean NAVWPNSTA Code 04.

3. The 4-year review and resubmittal of SOPs will also follow the sequence outlined in paragraph 1 of this enclosure including NSWC Head, Safety Department (Code 04) review and approval.

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**FORMAT AND CONTENT**

Each SOP shall contain the following:

1. **Record of Approval.** Form 8023/1 or 8023/3 for EPs. This record contains spaces for signature and dating by personnel internal to the processing activity that developed or reviewed the SOP and provides a space for the Commander's approval. The SOP approval sheet with typed signatures will be the first page of the SOP issued for actual operational use.
2. **Contents**
3. **Operational Procedure Change**
4. **Explosive Limits/Personnel Limits**
5. **Building or Site Diagram.** This is a diagram of the process building or site showing the location of various safety-related items with respect to the workstation. Safety-related items include fire extinguishers, fire suppression systems, eye wash stations, emergency showers, first aid kits, spill cleanup kits, ventilation systems or stations, emergency breathing devices, etc. Clearly illustrate explosive, and personnel limits, evacuation routes and emergency exits. This information may be provided as posted fire bills or spill contingency plans. Posted information will be reviewed concurrently with the SOP.
6. **Processing Diagram. [OPTIONAL]** This diagram includes information needed to clarify or amplify the information provided in the step-by-step procedures. Often this will take the form of a diagram using locally standardized symbols to indicate steps in the flow of materials through the various processing stages.
7. **Hazardous Materials List.** Alphabetical listing of all Hazardous Materials used in the SOP with corresponding MSDS/Hazardous Material Abstract number included.
8. **Safety Equipment List.** Provide a list of all the safety equipment (including personal protective equipment) and systems that must be in place and working properly in order to protect the safety of personnel, equipment, facilities, and the environment during the processing.
9. **Processing Equipment List.** Provide a list of all the approved tools, equipment, items, and supplies (hand tools, power tools, gauges and meters, industrial machinery, industrial handling equipment, consumables, etc.), which are or may be used in the processing.
10. **Step-By-Step Procedures.** Provide the worker with clear and concise step-by-step instructions for performing the process. The SOP shall be kept in the work area with the procedures readily available for the use of the worker performing the processing. SJPs, DMWEs, OPs, ISEA technical manuals, and drawings or other documents defining operations may be attached at this section of the SOP. The

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relevant sections must not contain extraneous instructions for processing not relevant to the SOP. The worker must not be required to leave the workstation to locate references nor jump haphazardly from section to section in order to perform the process safely and correctly. Documents that form part of the SOP must be reviewed during SOP development. Changes to these documents must be considered to be changes to the SOP. SOPs may contain technical instructions for which changes are expected to be routine (mix sheets, processing sheets, etc.). The SOP must document both the allowable variation limits and the process of approval for variations within the limits authorized by the SOP.

**11. Hazards, Hazards Control, and Hazard Control Briefings (HCB)**

a. **Type II HCB.** The Type II HCB addresses the operation and work area and is a required part of the SOP. It describes the hazards and control methods the worker will encounter

**12. Emergency Response and Contingency Plans.** This provides the workers with the following information:

a. Lists each of the accidents or incidents (fire, spill, explosion, runaway reaction, release of hazardous vapors, mechanical failure, injury, etc.) which could occur during processing and which would require immediate action to control.

b. List a single point of contact that the worker should notify in case of each accident or incident.

c. Lists initial and follow-up actions that the worker should take in case of each accident or incident.

**13. Security.** This provides the worker with all of the requirements necessary to maintain physical security, accountability, and disposition control of expendable ordnance end items and inherent components, hazardous materials, tools and equipment items. It also instructs the worker in measures to prevent unauthorized disclosure of classified information.

**14. Supporting Data, if required.**

**15. Worker's Statement.** Form 8023/4. This statement indicates that the worker understands his or her duties regarding the operations in the SOP. The worker must read the SOP and sign the statement to be authorized to train or work under the SOP.

**16. Process Supervisor's Statement.** Form 8023/5. Every process covered by an SOP must have a designated supervisor who is responsible to management for the operation. This statement indicates that the supervisor clearly understands his/her duties with regard to the SOP. The supervisor must read the SOP and sign the statement when he/she is first assigned responsibility for a process. This requirement also applies to acting supervisors when the regular supervisor is absent.

**17. RTA.** Review Team Analysis (RTA) Form 8023/2. Document review and monitor status for each SOP yearly.

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# **Enclosure 56** **IHDIVNAVSURFWARCENINST 8023.4**

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SOP APPROVAL  
 NDW-IHDIVNAVSURFWARCEN 8023/1 (Rev. 6-02)

## **STANDARD OPERATING PROCEDURE**

PROCEDURE TITLE				PROCEDURE SERIAL NUMBER	
				CHANGE NUMBER	DATE
EXPLOSIVE <input type="checkbox"/>	NONEXPLOSIVE <input type="checkbox"/>	DEPARTMENT 20	DIVISION 210	PREPARED BY (Signature)	
LOCATION					ORIGINAL DATE
APPROVED BY			APPROVED BY		
DEPARTMENT	SIGNATURE	DATE	DEPARTMENT	SIGNATURE	DATE
COMMAND APPROVAL (Signature) N. Bertucci			BY DIRECTION		

Distribution:

Controlled Copies

210 \_\_\_\_\_

Information Only Copies

MBD 1

210 \_\_\_\_\_ (includes 1 for yearly review)

Distribution Statement F: Further distribution only as directed by Commander, Indian Head Division, Naval Surface Warfare Center, Indian Head, MD 20640-5035, Code 20 via Code IS or higher DOD authority.

TASK CODE \_\_\_\_\_

Enclosure (7)

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IHDIVNAVSURFWARCENINST 8023.4B

RECEIPT OF CONTROL SOP

NDW-IHDIVNAVSURFWARCEN 8023/6 (10/01)

SOP NUMBER	SOP TITLE	
CHANGE NUMBER	MPC NUMBER	COPY NUMBER

REMARKS

I certify receiving the above controlled SOP and destroying the old revision by appropriate method. If I choose to maintain the old revision, I will mark the copy appropriately.		Previous Coversheets are attached	
		Change Number	MPC Number
PRINTED NAME	SIGNATURE	CODE	DATE

PLEASE SIGN AND RETURN TO CODE 073

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ENGINEERING PROCEDURE APPROVAL  
NOW IHDIVNAVSURFWARCENINST 8023.3 (Rev. 6-02)

**ENGINEERING PROCEDURE**

PROCEDURE TITLE				DURATION/COVERAGE:	
				ENGINEERING PROCEDURE: Expires:	
EXPLOSIVE <input type="checkbox"/>	NONEXPLOSIVE <input type="checkbox"/>	DEPARTMENT 20	DIVISION 210	PREPARED BY (Signature)	
LOCATION				ORIGINAL DATE	
APPROVED BY			APPROVED BY		
DEPARTMENT	SIGNATURE	DATE	DEPARTMENT	SIGNATURE	DATE
COMMAND APPROVAL (Signature) N. Bertucci			BY DIRECTION		

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HEADING

PAGE

REMARKS:

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TASK CODE \_\_\_\_\_

Enclosure (9)

**Enclosure 58**  
**Investigation of NSW Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

January 9, 2003  
310kb/002

**MEMORANDUM**

From: 310KB  
To: 30C2  
Via: 310 *wp*

Subject: INVESTIGATION OF NSW SCRAP YARD INCIDENT - DEC 2002: CHEMICAL AND PHYSICAL ANALYSIS OF MATERIALS REMOVED FROM INCIDENT SITE

Encl.: (1) *Investigation of NSW Scrap Yard Incident: Chemical and Physical Analysis*, report; Jan 03

1. As part of the investigation into the incident at the NSW scrap yard, materials from the event site were submitted to the NSW laboratory for chemical and physical analysis. The materials consisted of articles of clothing, personal protective equipment, and portions of the suspect ordnance item. Selected specimens underwent physical, photographic, chromatographic, microscopic, spectroscopic, and X-ray analysis. The enclosure is a detailed report of these analyses.
2. Further testing on any materials will be performed as directed by the investigation team. If you have any further questions, please contact K. Basom, X4765.



Kenneth E. Basom

**Enclosure 58**  
**Investigation of NSW Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

**Cockerham Barbara L IHMD**

---

**From:** Sandagger Karrie H IHMD  
**Sent:** Monday, January 13, 2003 11:42 AM  
**To:** Cockerham Barbara L IHMD  
**Subject:** FW: Investigation final Report

Please ensure Craig gets this info.

-----Original Message-----

**From:** Basom Kenneth E (Ken) IHMD  
**Sent:** Monday, January 13, 2003 10:54 AM  
**To:** Smith Thomas C (Craig) IHMD  
**Cc:** Sandagger Karrie H IHMD; Dunn Michael W (Test Dept) (Mike) IHMD  
**Subject:** RE: Investigation final Report

Craig,

Total mass of projectile fragments and fuse = 4541 grams.

Projectile diameter-difficult to measure due to distortion - widest dimension = 4 inches; radius (using extrapolated center)  
= 2 inches.

Fuse: base = 3.6 cm diameter at widest aspect, 3.2 cm diameter at narrowest aspect. Length = 9.5 cm.

Any further questions, please contact.

Ken

-----Original Message-----

**From:** Smith Thomas C (Craig) IHMD  
**Sent:** Friday, January 10, 2003 7:42 AM  
**To:** Basom Kenneth E (Ken) IHMD  
**Subject:** Investigation final Report

Ken,

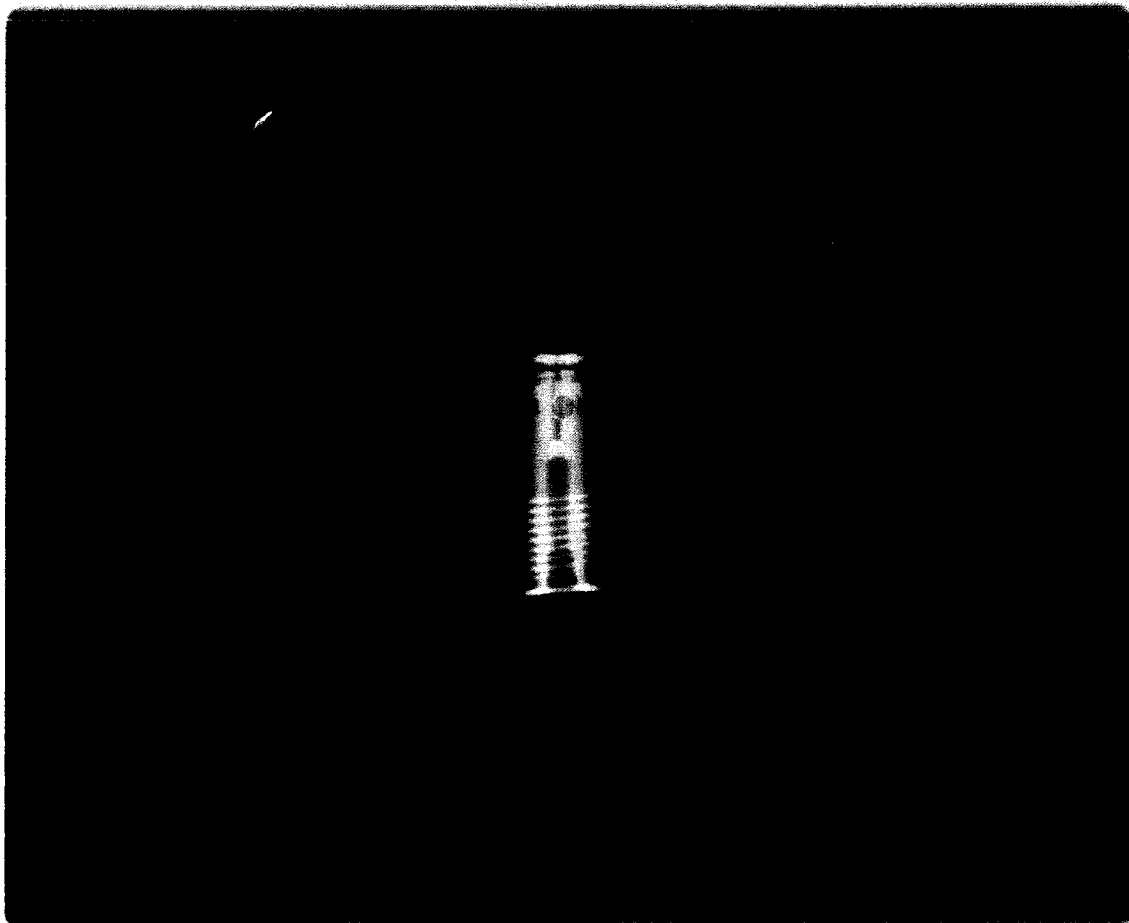
I have what I hope is a final request for info, as you, apparently, are still in possession of the projectile fragments.

I still require confirmation of the projectile diameter.  
measurements of dimensions on the base ignition fuze: length and diameter  
Total mass of all projectile fragments including the base ignition fuze.

Thanks for your assistance.

Craig Smith

Enclosure 58  
Investigation of NSW Scrap Yard Incident December 2002 Chemical  
and Physical Analysis



# **INVESTIGATION OF NSWC SCRAP YARD INCIDENT-DECEMBER 2002**

## **Chemical and Physical Analysis**

*Kenneth E. Basom*  
*Inchan Choi*  
*Jennifer Fortner*  
*Steven L. Helberg*  
*Franklin Martin*  
*Michael Shepard*  
*Lisa Sperka*  
*Laura A. Tinsley*



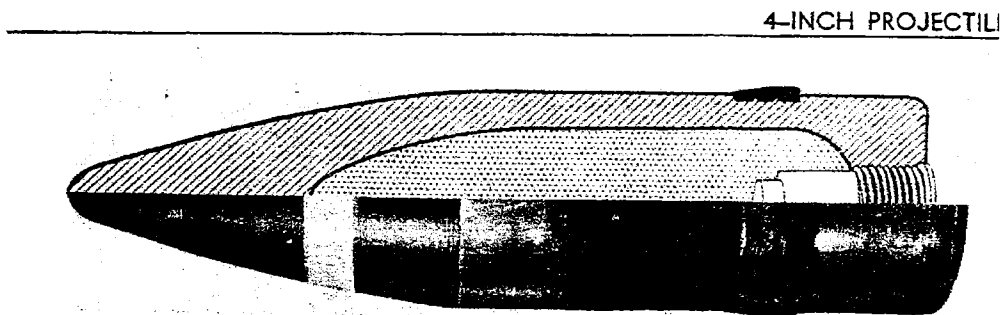
**Enclosure 58**  
**Investigation of NSWC Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

---

**INTRODUCTION**

---

On 3 Dec 02, an explosive incident occurred at the NSWC scrap yard during a cutting operation. During the cutting of an ordnance item with a torch, an explosion occurred resulting in the fragmentation of the item and physical damage to the operator. The unit, which had been tagged as inert, was provisionally identified as a Mk 10 projectile (Figure 1).



*Figure 25. 4-inch Common Mk 10 Mods 1—3*

Fuzes ..... Base — Mk 10 Mod 4  
For target practice, this round is also issued  
B.L. & P. or B.L. & T. with adapter and Tracer  
Mk 6 Mod 1.

**Figure 1. Mk 10 4-inch Projectile**

As part of the subsequent investigation, materials from the event site were delivered to the NSWC laboratory for chemical and physical analysis. The materials included articles of clothing, personal protective equipment and metal fragments contained in a single plastic bag. Laboratory personnel subsequently collected materials from the event site that included a piece of a protective visor and a metal fragment. Other pieces of the protective visor and a fuse assembly were subsequently delivered to the laboratory.

The following report details the work performed by the laboratory in support of this investigation.

**Enclosure 58**  
**Investigation of NSW Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

---

**SECTION I. SAMPLE HANDLING PROCEDURES**

---

Upon receipt in the laboratory, all samples were temporarily secured in a limited- access laboratory area. The room was subsequently fitted with a secure lock and keys issued to three members of the laboratory investigation team. A "clean" room was prepared by stripping work areas with solvents and lining surfaces with plastic-backed absorbent paper. The entrance of the clean room was placarded and access was limited to members of the laboratory investigation team. All samples were unpacked, photographed, catalogued, and sealed in the clean room. All specimens for analysis were withdrawn in the clean room. Protocols were enforced to prevent the cross-contamination of samples and contain biohazards including establishing fields for sampling handling, use of surgical gloves, disposable contact surfaces, and containment of all generated waste.

Samples were individually sealed in groove-locked polypropylene bags with larger samples placed in plastic liners. Identifying photographs of each sample were taken with a digital camera and the samples were catalogued. Custodianship protocols were enacted to provide for the security of all materials. All samples are listed in Table 1 with accompanying sample description, assigned sample numbers and corresponding photograph numbers. Photographs of all samples are contained in Appendix A.

**Table 1. Sample List**

<u>Sample Number</u>	<u>Sample Description</u>	<u>Photograph(s) Number</u>
1	shoe, right	1
2	shoe, left	3
3	glove, left, rawhide	7
4	cap, "Old Navy"	8
5	apron, right leg piece separated, rawhide	9
6	coverall, rawhide, blood stained, mold	10
7	pants with belt	11

**Enclosure 58**  
**Investigation of NSW Scrap Yard Incident December 2002 Chemical and Physical Analysis**

8	T-shirt	12
9	gloves, 1 pair and right	13
10	briefs, blue	17
11	cotton glove, left	18
12	sock, wool	19

**Table 1. Sample List (continued)**

<u>Sample Number</u>	<u>Sample Description</u>	<u>Photograph(s) Number</u>
13	miscellaneous; leather legging sock piece	20
13	metal piece, taken 10 feet east of event site	21
14	face shield, fragments, taken 20 feet north of event site	22
16	wax piece	23
17	* / evid #1, metal pieces (2)	24
18	evid #3 (metal piece)	26
19	evid #2 (metal piece)	28
20A	top front visor (crown)	30
20B	top side visor	31
20C	fragments of visor	32
21	* 2 metal parts	33
22	* fuse	35,37

\* These items were found during EOD grid search.

Surface specimens were taken for analysis by ion mobility spectroscopy (IMS) and gas chromatography/chemiluminescence (EGIS) by direct transfer to the test media. Surface specimens for analysis by inductively coupled argon plasma spectroscopy (ICAP) were taken using moistened cotton applicators. Similarly, surface specimens for analysis by liquid chromatography/photodiode array (LC/PDA) were removed using acetone-wet cotton applicators. Both the ICAP and LC/PDA swabs were sealed in scintillation vials along with procedural blanks to await analysis. The surface materials for

**Enclosure 58**  
**Investigation of NSWC Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

analysis by Fourier transform infrared spectroscopy (FTIR) were removed by mechanical abrasion. The photographs contained in Appendix B indicate the surface areas sampled for analysis.

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**SECTION II. ANALYSIS OF SAMPLES**

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**IMS and EGIS Analysis**

**Selection of Sample and Specimen Area**

The initial selection of samples and surface areas to be examined by EGIS and IMS analysis were based on various factors including sample handling and the proximity of the item to the event. With the exception of samples numbered 14, 16, 17, 18, 19, and 20A through 22, sample materials had been received in a single receptacle allowing for the possibility of cross-contamination by contact. Of the noted exceptions, only Sample #14 and #20B were sealed at the event site thereby eliminating the possibility of cross-contamination or other adulteration of the sample. Sample #14 was a metal fragment which appeared to originate from the ordnance item and Sample #20B was a fragment from the side of protective visor worn by the operator. Unlike the porous, oxidized surface of the fragment, the visor surface was composed of a smooth, non-porous surface facilitating the identification and removal of deposited materials. Additionally, the close proximity of the visor to the ordnance item during the event increased the probability of materials being deposited on the surface.

Under high illumination, discrete deposits of materials were observed on the visor surface. The deposits were yellowish-white to orange and adherent to the surface. Appearing as irregular, rough adhesions, the materials appeared to have been wet or in molten form when deposited on the surface. The deposits can be seen near the bottom "tine" in Figure C-1 in Appendix C and more clearly in the magnified presentation in Figure C-2. Using magnification and increasing the red levels of the photographs, the deposits are clearly evident in Figures C-3 through C-5. These areas are represented in Figure B-2 in Appendix B as 20B-2 and 20B-1

**Selection of Target Analyte**

The selection of the initial analysis to be performed on the visor deposits was based mainly on the circumstances of the event. Excluding the possibility of materials contained in the primer, tracer, and starter mixtures in the fuse, the only other energetics that could have been present were TNT and black powder. The former as part of the explosive fill and the latter as part of the explosive fill and contained in the fuse magazine<sup>1</sup>. Members of the investigation team also discussed the possibility of gasoline from the cutting torch eliciting the event.

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The magnitude of the event appeared to preclude all but the effect of a high explosive. As can be seen in Figure A-18 in Appendix A, the event split the tip of the projectile. Given the purpose the ordnance was designed for, a low/medium explosive would not appear to have sufficient energy to cleave this portion. By comparison, large fragments of the friable housing of pipe bombs, containing larger charges of black powder, remain after detonation. These casings can be distorted by striking with a hammer while the projectile could not be cut with a low-speed titanium drill bit. The few grams of black powder in the fuse magazine alone, therefore, appeared inadequate to fracture the metal in the observed fashion. An explosion from a gasoline "pocket" yielding even less energy also seemed inadequate to effect the observed damage to the projectile. Initial analyses of the visor and subsequent samples were, therefore, for the high explosive in the fill of the item-TNT.

**Methodology**

IMS and EGIS were chosen for initial analysis due to: the sensitivity of detection for TNT; specificity for energetic materials including TNT; brevity of analysis and; the reliance of the approaches on wholly different qualities of the analyte providing for corroborative analyses. IMS detects ions produced using ionizing radiation after separation is afforded by the variation in residence times in an imposed electric field. EGIS separates materials in the vapor state by their relative affinity for a stationary phase followed by selective detection for nitro-compounds (chemiluminescence).

Samples for IMS and EGIS analysis were taken by direct transfer to sample media. Sampling areas were chosen by removing areas with visible deposits and randomly over other areas of the sample. Figure B-2 indicates the areas of the visor fragment sampled for analysis. The sampled areas of other materials are indicated in the other figures in Appendix B.

**Results of Analysis**

Table 1 contains the results of the analysis of the samples.

**Table 1. Results of IMS and EGIS Analyses**

<u>Sample Description</u>	<u>Sample Area</u>	<u>Analyte(s) Detected<sup>a</sup></u>
top front visor (crown), Sample #20A	20A-5	TNT, DNT <sup>b</sup>
	20A-4	TNT
	20A-3	TNT, DNT <sup>b</sup>
	20A-1	TNT
	20A-2	TNT
top side visor, taken 20 ft. from event site, Sample #20B	20B-1	TNT, DNT <sup>b,c</sup>
	20B-2	TNT, DNT <sup>b,c</sup>
	20B-3	TNT <sup>c</sup>
metal piece (evid #3), Sample # 18	18-1	TNT
	18-2	TNT

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**Investigation of NSWC Scrap Yard Incident December 2002 Chemical and Physical Analysis**

evid #2 (metal piece), Sample # 19	19-1 19-2	TNT (trace) TNT
metal piece, taken 10 ft. from event site, Sample #14	14-1 14-2	TNT, DNT <sup>b</sup> TNT
fuse, Sample #22	22-1 22-2 22-3	nd <sup>d</sup> nd <sup>d</sup> nd <sup>d</sup>

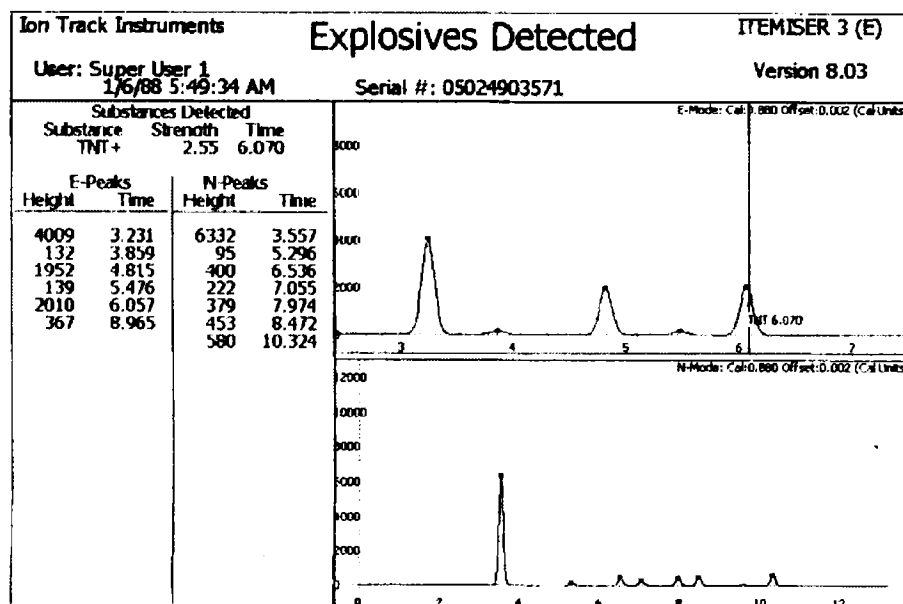
<sup>a</sup> detection by EGIS system, unless otherwise noted

<sup>b</sup> dinitrotoluene

<sup>c</sup> verified by IMS analysis

<sup>d</sup> none detected

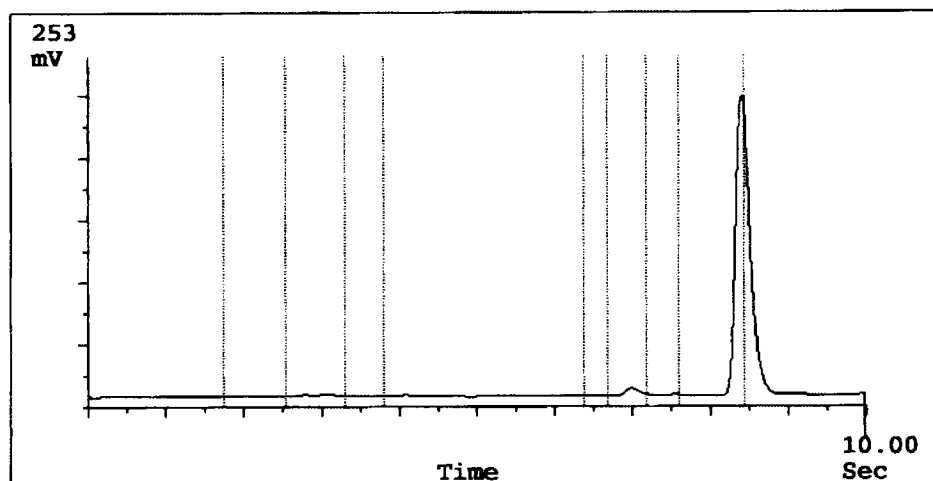
As can be seen in Table 1, all but three (3) of the tested surfaces contained TNT indicating the presence of the energetic at the time of the event. Assignment of a positive detection response was performed by software-based algorithms and based on the previously mentioned selective factors. Outputs consisted of a plasmagram or chromatogram (Figures 2 and 3) identifying the signal, residence time (drift or retention time) and signal amplitude. The other analyte detected in the samples is DNT (dinitrotoluene) present as an artifact of TNT manufacture<sup>2</sup> (Figure 4). The absence of TNT on the surface of Sample #21 could be due to heating of the unit during the cutting operation or as a product of the event. As can be seen in Figure E-2 in Appendix E, the surface of the fuse is discolored in a fashion indicative of surface heating.



**Figure 2. Plasmagram from IMS - Sample Containing TNT**

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Chromatogram



EXPLOSIVE	RETENTION	INTENSITY	S/N RATIO
TNT	8.428	244	0

Figure 3. Chromatogram from EGIS - Sample Containing TNT

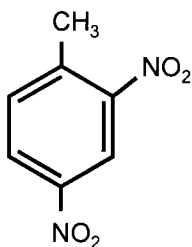


Figure 4. Dinitrotoluene

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**Investigation of NSWC Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

**ICAP Analysis**

**Selection of Sample and Specimen Area**

Samples tested for ICAP analysis were similar to those chosen for IMS and EGIS analysis. These included portions of the face visor and fragments from the ordnance device. Areas previously sampled for other analyses were not resampled for ICAP analysis. The figures in Appendix B indicate areas of the surface sampled for ICAP analysis.

**Selection of Target Analyte**

As the previous analyses indicated the presence of TNT, black powder-the other component of the explosive fill<sup>1</sup>-was analyzed for by ICAP. Since nitrates can not be directly analyzed for by ICAP, the analysis was performed for both potassium and sulfur. The latter present in elemental or oxidized form.

**Methodology**

Specimens for ICAP analysis were taken by wiping surface areas with cotton swabs wetted with lab-grade water. The swabs were placed in labeled scintillation vials and sealed prior to analysis. Standard protocols were used to prepare the materials for analysis.

**Results of Analysis**

The results of the ICAP analysis are listed in Table 2.

**Table 2. Results of ICAP Analyses**

<u>Sample Description</u>	<u>Sample Area</u>	<u>% Sulfur<sup>a</sup></u>	<u>%Potassium<sup>a</sup></u>
face shield fragments, Sample #15	15-1	.0433	<.016
	15-2	nd	nd
top front visor (crown) Sample #20A	20A-6	nd	nd
	20A-7	nd	nd



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**Investigation of NSWC Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

top side visor , Sample #20B	20B-4	nd	nd
	20B-5	nd	nd
metal piece, taken 10' from east of event site, Sample #14	14-3	.0174	<.10

**Table 2. Results of ICAP Analyses (continued)**

evid #3 (metal piece), Sample # 18	18-3	.0168	0.119
evid #2 (metal piece) Sample #19	19-4	0.0529	0.150

<sup>a</sup> percent by weight

nd - not detected, below detection limits

As can be seen in Table 2, sulfur and potassium were detected in approximately half of the specimens. Assuming black powder was present, the failure to detect either component in the remaining specimens could be due to inadequate transfer of materials to the swab, inadequate detection sensitivity or loss of the materials during sample handling.

**SEM/EDS Analysis**

**Selection of Sample and Specimen Area**

Areas examined by Scanning Electron Microscopy (SEM) were selected by visual examination of surfaces or photographs/enhanced photographs of surface areas. Areas containing apparent deposits of material or other anomaly were photographed and some of the areas were subjected to elemental analysis by Electron Dispersive Spectroscopy (EDS).

**Methodology**

SEM pictures were taken using an AMRAY Scanning Electron Microscope (Model 1920 ECO-SEM). EDS data was obtained with a PGT IMIX-PTS system. The ECO-SEM was operated in low-vacuum mode with a nitrogen flow of 75 to 125 mTorr. Aluminum stubs lined with conductive carbon were used to mount specimens for analysis.

**Results of Analysis**

Shield - Sample #20B

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Fuse - Sample # 22

The surface of the fuse contained deposited material (Figure D-14) composed of iron, copper, zinc, sulfur, potassium, calcium, aluminum, and silicon. EDS on a deposit-free region (Figure D-15) detected strong signals for copper and zinc (Figures D-16, D-17) suggesting the fuse was composed of brass. Spherical particles found on the deposits (Figure D-15) were rich in iron (Figures D-18 and D-19). Large spheres (approximately 100 microns in diameter) were also found in the fuse's threads (Figure D-20).

The fuse base is 3.6 cm in diameter at the widest aspect and 3.2 cm in diameter at the narrowest, with a total length of 9.5 cm. Visual examination of the fuse body found symbols on the body and base of the fuse. Stamped on the long axis of the fuse body was the letter 'R' next to an anchor shaped symbol with the number '161' appearing below it and the letters 'MB' below the number. The letters were merged such that the right side of the 'M' formed the left side of the 'B'. On the base of the fuse was the same anchor symbol followed by 'R 161'.

Material attached to metal fragment (Sample #17)

A piece of material attached to a metal fragment (Sample #17), originally considered to be a portion of the metal, generated strong signals for calcium, iron, phosphorous, and silicon - not indicative of the metal matrix. Evaluation of the relative composition determined the extraneous material to be a piece of bone from the victim. High magnification of SEM pictures revealed spherical particle of varying size and fibers (Figure E-3 in Appendix E) on the surface of the fragment.

Scrape 1(Sample #19)

Brown particles removed from the thread region of fragment of the ordnance item were determined to contain iron by EDS analysis. Copper and zinc, components of the fuse, were not detected in the material.

Scrape 2 (Sample #19)

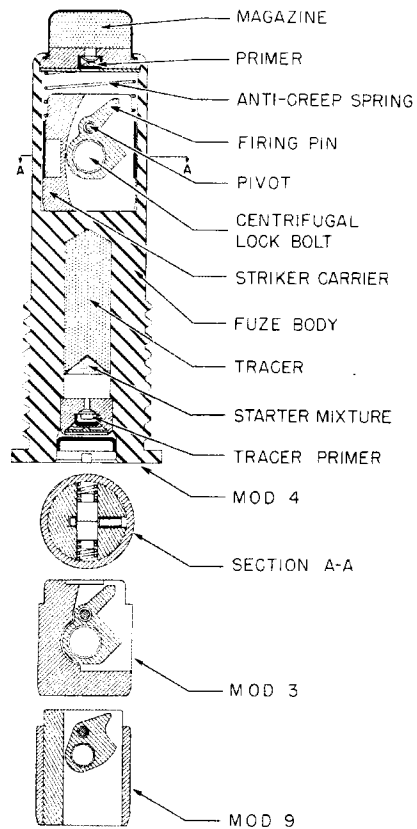
A shiny, black deposit was removed from near the thread region of Sample #19. SEM and EDS analysis detected three distinct crystalline shapes: orthorhombic (potassium rich), needle shaped (possibly potassium sulfate), and tetrahedral (sulfur rich). The iron rich, spherical particles were also found on the surface.

The presence of potassium and sulfur on the visor are consistent with the presence of black powder or the combustion products of the energetic. Since the other component of the explosive fill-TNT- was detected in the earlier analysis, it can be assumed at least a portion of the material originated in this area. The sulfur detected in the black residue from the fill cavity can also be assigned to the presence of black powder or its combustion products.

The spherical particles found on the items appear to be present due to the action of the torch on the metal during the cutting operation. The fibers on the metal fragment containing the bone specimen appear to originate from the clothing of the victim.

The material contained in the threads of the fuse was inadequate to match to the material composing the fuse well. The fuse body, however, mated perfectly to the well (Figure E-4, Appendix E) with no significant margins appearing at interfacing points. Additionally, the ovoid base of the fuse matched the corresponding distortion in the geometry of the fuse well indicating the recovered fuse originated in the ordnance item and was present when the distortion occurred. The two mated samples had a total weight of 4541 g. The exact diameter of the fragment is difficult to determine due to distortion, however, using an extrapolated center, a radius of 2 inches can be approximated. From this, the widest dimension was determined to be approximately 4 inches.

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**Investigation of NSWC Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**



**Figure 5. Diagram of Base Ignition Fuse Mk 10**

**FTIR**

Analysis was run on a red residue contained on the surfaces of metal fragments and other materials removed from the event site. While Fourier transform infrared spectroscopy (FTIR) could not determine the composition of the material, the visual appearance is similar to the wax used in inert fills (Sample #16, "red beeswax", Figure A-23, Appendix A).

**Enclosure 58**  
**Investigation of NSW Scrap Yard Incident December 2002 Chemical**  
**and Physical Analysis**

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**CONCLUSIONS**

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The presence of TNT on the samples withdrawn from the site indicated the event resulted from the detonation of the explosive fill of the ordnance item-the presence of TNT determined by three different analyses (EGIS, IMS, and LC/PDA). DNT, an artifact of TNT manufacture, was also detected in several of the samples. The circumstances of the event, including the splitting of the unit's projectile, further indicated the detonation of the high explosive.

Assuming black powder was present in the explosive fill of the item, the low levels of potassium and sulfur found on sample surfaces could have been a product of the analysis (i.e. inadequate sample transfer or detection limits). The detection of sulfur in a residue in the fill cavity, however, indicated the presence of black powder in the fill or fuse magazine at the time of the event.

The mating of the fuse with the threads of the fuse well indicated the recovered unit originated in the ordnance item. Distortions in the geometry of the fuse body corresponded to those of the well indicating the presence of the unit when the distortions occurred. Radiographic evaluation of the fuse determined the event was not a result of actuation of the firing pin-the pin had not rotated into firing position. Materials observed in the X-rays of the assembly were later determined to be residues from the firing of the upper primer. These analyses could not determine whether the primer had fired as a result of the event.

**Enclosure 59**  
**Geary and Loperfido Letter of 26 Dec 02 INRE: Steve Jackson.**

GEARY AND LOPERFIDO, LLC  
ATTORNEYS AT LAW  
158 GRANT AVENUE  
VANDERGRIFT, PA 15690  
(724) 568-3694  
FAX: (724) 568-2500

*E-mail address*  
*ldl@gllawyers.com*

**RECEIVED**  
DEC 26 2002

TIMOTHY J. GEARY  
LARRY D. LOPERFIDO

TIMOTHY P. GEARY  
EMILY K. PAINTER

125 MARKET STREET, STE. 3  
KITTTANNING, PA 16201  
(724) 543-2383

December 23, 2002

Sharon Tamski  
Shaw Environmental and Infrastructure, Inc.  
27790 Mossie Blvd.  
Monroeville, PA 15146

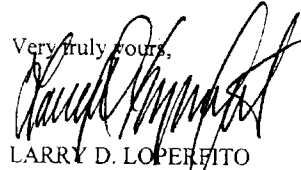
**IN RE: Steve Jackson**

Dear Ms. Tamski:

Last week you presented questions which were posed by Linda Goforth of the Indian Head Division of the Naval Surface Warfare Center of Indian Head, Maryland. The questions are related to a tragic incident which occurred at the Indian Head Scrapyard on November 21, 2002.

Should you have any questions or concerns with regard to the information attached, please contact me directly.

Very truly yours,

  
LARRY D. LOPERFIDO

LDL/brm  
Enclosure

*Please visit our Web site at <http://www.gllawyers.com>*

**Enclosure 59**  
**Geary and Loperfite Letter of 26 Dec 02 INRE: Steve Jackson.**

**QUESTIONS & ANSWERS**

- 1) How was this unit identified to you?  
Al Grant told him to cut this one next.
- 2) What was the instruction given to you concerning this unit?  
Cut this one in half lengthwise.
- 3) How did you know it was safe to cut this unit with the torch?  
Steve was instructed to do so.
- 4) Was the unit marked with spray florescent paint?  
No specific recollection.
- 5) What was the condition of the unit?  
Good condition. It looked like it was cleaner than the other rounds. It was painted silver and was in very good condition.
- 6) What was the color of the unit?  
Silver
- 7) Did you notice any unique characteristics of the unit?  
The cleanliness and the color. It did not have any rust or mark on it like the other ones.
- 8) Did you notice any holes or penetrations on the base of the unit?  
No specific recollection at this time.
- 9) Did you see different coloration's on the base of the unit?  
No.
- 10) Was the unit standing up or laying down when the torch was applied?  
Laying down.

**Enclosure 59**  
**Geary and Loperfido Letter of 26 Dec 02 INRE: Steve Jackson.**

- 11) Were you holding the unit in place while cutting with the torch?  
No.
- 12) Where did you apply the torch flame to the unit?  
The nose of the unit.
- 13) Did the torch penetrate the unit's interior?  
Unknown.
- 14) How long was the torch applied to the unit before the incident?  
Less than one minute.
- 15) Did the torch go out during the cutting of this unit?  
Not prior to the explosion.
- 16) Did you observe anything unusual in cutting this unit?  
No.
- 17) Did you smell, hear or see anything unusual just prior to the incident?  
No.
- 18) Do you recall any conversations immediately after the incident?  
"Stay with me, you're going to live."
- 19) What were the different failure modes of the torch?  
I do not understand the question.
- 20) Did the torch function differently when it had been used and was warm, compared to the first use of the day?  
No.
- 21) Was it operating normally the day of the incident?  
No.

**Enclosure 59**  
**Geary and Loperfido Letter of 26 Dec 02 INRE: Steve Jackson.**

- 22) Did you have any occurrences when the torch flame went out and the gasoline continued to flow?

Not on the day of the incident.

- 23) Had you been using the Petrogen torch that day prior to the incident?

Yes.



**Enclosure 60.**  
**Technical Directive TD-001**

**LANTDIV RAC FIELD FORM**

Contract No. N62470-97-D-5000  
Task Order No. 00  
Title/Location Site 41  
**INDIAN HEAD, MARLAND**

Technical Directive for Site 41

**DISTRIBUTION:**

\_\_\_\_ CONTRACTING OFFICER/SPECIALIST (TD'S)  
\_\_\_\_ ROICC  
\_\_\_\_ RPM  
\_\_\_\_ COTR:  
OTHER: \_\_\_\_\_  
FILE: \_\_\_\_\_

Form No. TD-001		Date: 11-1-02	Respond *NLT:
Initiated By: <input type="checkbox"/> Navy <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Other			
<input checked="" type="checkbox"/> Technical Direction <input type="checkbox"/> RFI <input type="checkbox"/> Variance Request <input type="checkbox"/> Overtime Authorization			
Description (include location & attachments if necessary): Prior to remedial activities at the site, OE and non-OE items must be separated from the contaminated soil. The UXO items must be identified, separated, screened and demilled. The large non-OE items will be separated and staged.			
Attachment <input checked="" type="checkbox"/> Cost Estimate			
Drawing Ref:		Spec. Ref.	
Explanation/Recommendation: This Out of Scope Technical Directive is for personnel and equipment to identify, separate, screen and demilling of UXO items remaining on the pad and for the separation, decontamination and on site storage of non-OE items. This Technical directive does not include any costs associated with the transportation or treatment of OE residue items or disposal of OE items.			
<input checked="" type="checkbox"/> Scope Increase <input type="checkbox"/> Scope Decrease <input type="checkbox"/> No Change in Scope		Cost impact, fee excluded: <input type="checkbox"/> None <input checked="" type="checkbox"/> Cost Increase <input type="checkbox"/> Cost Decrease Rough Order of Magnitude: \$ 180,000	
WBS Codes Affected:  New <input checked="" type="checkbox"/> Existing <input type="checkbox"/>  69909230 UXO Support		Schedule Impact (assume response by *NLT date) <input type="checkbox"/> None <input checked="" type="checkbox"/> Increase in Time <input type="checkbox"/> Decrease in Time Approximate Calendar Days: 5-weeks	
Contractor:		Signature	
Site Representative:		Date	
Project Manager:		11-1-02	
		11-01-02	
Reviewer Comments, incl RFI Response:			
Navy:		Signature	
ROICC:		Date	
RPM/EIC		11/1/02	
		11/12/02	
<input checked="" type="checkbox"/> Task Order Modification to Follow (contract action) <input type="checkbox"/> No Task Order Modification Required			

**Enclosure 60.**  
**Technical Directive TD-001**

Project# 831866  
Site 41 Scrapyard

**UXO DEMIL OPERATION**

Labor	Rate	OT	Hours	Subtotal	Fringe	Markup
Project mgr	\$ 41.33	\$ 41.33	80	\$ 3,306.40	\$ 4,202.43	\$ 5,190.01
UXO CONSULTANT	\$ 85.00	\$ 85.00	40	\$ 3,400.00	\$ 4,321.40	\$ 5,336.93
Site Mgr	\$ 31.94	\$ 31.94	125	\$ 3,992.50	\$ 5,074.47	\$ 6,266.97
QC	\$ 26.67	\$ 26.67	125	\$ 3,333.75	\$ 4,237.20	\$ 5,232.94
PBA	\$ 17.91	\$ 26.87	125	\$ 2,238.75	\$ 2,845.45	\$ 3,514.13
HSO	\$ 17.53	\$ 26.30	250	\$ 4,820.75	\$ 6,127.17	\$ 7,567.06
Foreman	\$ 18.50	\$ 27.75	250	\$ 5,087.50	\$ 6,466.21	\$ 7,985.77
Equip Oper - V	\$ 17.22	\$ 25.83	250	\$ 4,735.50	\$ 6,018.82	\$ 7,433.24
Equip Oper - V	\$ 17.22	\$ 25.83	250	\$ 4,735.50	\$ 6,018.82	\$ 7,433.24
Field Serv. Tech	\$ 10.00	\$ 15.00	250	\$ 2,750.00	\$ 3,495.25	\$ 4,316.63
Field Serv. Tech	\$ 10.00	\$ 15.00	250	\$ 2,750.00	\$ 3,495.25	\$ 4,316.63
UXO SUPERVISOR	\$ 30.00	\$ 45.00	250	\$ 8,250.00	\$ 10,485.75	\$ 12,949.90
UXO TECH	\$ 25.00	\$ 37.50	250	\$ 6,875.00	\$ 8,738.13	\$ 10,791.58
UXO TECH	\$ 25.00	\$ 37.50	250	\$ 6,875.00	\$ 8,738.13	\$ 10,791.58

Total Labor \$ 99,126.63

**Per Diems**

	Diem	Lodging	Days	Daily	Total Diem	Markup
Site Mgr	\$ 30.00	\$ 60.50	17	\$ 90.50	\$ 1,538.50	\$ 1,626.19
QC	\$ 30.00	\$ 60.50	17	\$ 90.50	\$ 1,538.50	\$ 1,626.19
PBA	\$ 30.00	\$ 60.50	17	\$ 90.50	\$ 1,538.50	\$ 1,626.19
HSO	\$ 30.00	\$ 60.50	35	\$ 90.50	\$ 3,167.50	\$ 3,348.05
Foreman	\$ 60.00	\$ 60.50	35	\$ 90.50	\$ 2,108.75	\$ 2,228.95
Equip Oper - IV	\$ 30.00	\$ 30.25	35	\$ 60.25	\$ 2,108.75	\$ 2,228.95
Equip Oper - IV	\$ 30.00	\$ 30.25	35	\$ 60.25	\$ 2,108.75	\$ 2,228.95
Field Serv. Tech	\$ 30.00	\$ 30.25	35	\$ 60.25	\$ 2,108.75	\$ 2,228.95
Field Serv. Tech	\$ 30.00	\$ 30.25	35	\$ 60.25	\$ 2,108.75	\$ 2,228.95
UXO SUPERVISOR	\$ 30.00	\$ 60.50	35	\$ 90.50	\$ 3,167.50	\$ 3,348.05
UXO TECH	\$ 30.00	\$ 60.50	35	\$ 90.50	\$ 3,167.50	\$ 3,348.05
UXO TECH	\$ 30.00	\$ 60.50	35	\$ 90.50	\$ 3,167.50	\$ 3,348.05

Total Diems \$ 29,415.52

**IT Equipment**

	Rate		Days		Total	Markup
Excavator w/ grapple	\$ 197.00	/day	35		\$ 6,895.00	\$ 9,032.45
screening plant	\$ 150.00	/day	35		\$ 5,250.00	\$ 6,877.50
volvo 150 loader	\$ 175.00	/day	35		\$ 6,125.00	\$ 8,023.75
pick up truck	\$ 23.00	/day	35		\$ 805.00	\$ 1,054.55
pick up truck	\$ 23.00	/day	35		\$ 805.00	\$ 1,054.55

**Enclosure 60.**  
**Technical Directive TD-001**

plasma arc cutter	\$	85.00	/day	35	\$	2,975.00	\$	3,897.25
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Total IT Equipment \$ 29,940.05

**Mobe/demobe Equip**

	unit rate		units		Total	Markup
320 EXC w/ grapple	\$	450.00	R/T	1 EA	\$ 450.00	\$ 475.65
vovlo loader	\$	100.00	R/T	1 EA	\$ 100.00	\$ 105.70
screen plant	\$	712.00	R/T	1 EA	\$ 712.00	\$ 752.58
screen plant set up	\$	800.00		1 EA	\$ 800.00	\$ 845.60

Total Rental Equipment \$ 2,179.53

**Rental Equipment**

	unit rate		units		Total	Markup
JD 690 Excavator	\$	811.80	/wk	5	\$ 4,059.00	\$ 4,290.36
BOBCAT SKID LOADER	\$	114.00	/wk	5	\$ 570.00	\$ 602.49
GENERATOR	\$	45.00	/wk	5	\$ 225.00	\$ 237.83
GENERATOR	\$	45.00	/wk	5	\$ 225.00	\$ 237.83
PRESSURE WASHER	\$	34.00	/day	5	\$ 170.00	\$ 179.69
TRAILER 32' w/ steps blk/l	\$	22.00	/day	35	\$ 770.00	\$ 813.89

Total Rental Equipment \$ 6,362.08

**Materials & ODC's**

	unit rate		units		Total	Markup
utilities	\$	220.00	/wk	5	\$ 1,100.00	\$ 1,162.70
H & S Equip	\$	165.00	/wk	5	\$ 825.00	\$ 872.03
FOGMA	\$	560.00	/wk	5	\$ 2,800.00	\$ 2,959.60
6 loads cr-6 stone	\$	350.00	/ea	6	\$ 2,100.00	\$ 2,219.70
T & D decon water	\$	0.32	/gal	5000	\$ 1,600.00	\$ 1,691.20
Airfare for Addl UXO Tech	\$	1,100.00	round trip	1	\$ 1,100.00	\$ 1,162.70

Total Materials & ODC's \$ 10,067.93

**REVENUE SUMMARY**

<b>Labor</b>	<b>\$</b>	<b>99,126.63</b>
<b>Per Diem</b>	<b>\$</b>	<b>29,415.52</b>
<b>IT Equipment</b>	<b>\$</b>	<b>29,940.05</b>
<b>Field Purchase</b>	<b>\$</b>	<b>2,179.53</b>
<b>Rental Equipment</b>	<b>\$</b>	<b>6,362.08</b>
<b>Materials &amp; ODC's</b>	<b>\$</b>	<b>10,067.93</b>
	<b>\$</b>	<b>177,091.74</b>

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE U	PAGE OF PAGES 1   5
2. AMENDMENT/MODIFICATION NO. 01		3. EFFECTIVE DATE 14-Jan-2002		4. REQUISITION/PURCHASE REQ. NO. PR-5000-97-0077	
5. PROJECT NO. (if applicable)					
6. ISSUED BY COMMANDER, ATLANTIC DIVISION NAVFACENCOM 1510 GILBERT STREET BUILDING N26 NORFOLK VA 23511-2898		7. ADMINISTERED BY (if other than item 6)  See item 6		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)  OHM REMEDIATION SERVICES CORPORATION  8700 THURSTON AVE SUITE 116B VIRGINIA BEACH VA 23455-3302				9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
				X 10A. MOD. OF CONTRACT/ORDER NO. N82470-97-0-5000-0077	
				10B. DATED (SEE ITEM 13) X 21-Sep-2001	
CODE 4V026		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 9 and 13, and returning copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter. provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (if required) See Schedule					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF FAR 52.243-2, Changes-Cost Reimbursement Alternate III (APR 1984)					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not. <input checked="" type="checkbox"/> is required to sign this document and return 1 copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) P.L.A.C.: SITE 41 REMEDIAL DESIGN REVIEW, NAVSURFWARREN INDIAN HEAD, MD  This modification is issued in accordance with the costs established in P00009 dated October 1, 2001 to furnish all labor, materials, equipment, supervision, travel and subsistence necessary for the contractor to provide a review of the 100% design for Site 41, NAVSURFWARREN Indian Head, Maryland, all as directed by the Contracting Officer.  SUBMIT INVOICES FOR PAYMENT IN ACCORDANCE WITH THE CONTRACT. PAYMENT WILL BE MADE BY DEFENSE FINANCE AND ACCOUNTING SERVICE, OPERATING LOCATION OAKLAND, ATTN: CODE FPV, P.O. BOX 23870, OAKLAND, CA. NOT SUBJECT TO THE PROMPT PAYMENT ACT.  Copy to: EFACHES CH20C (JM/JC) NSWC (D46C) EV31KW EV31JR AQ11 AQ113 AQ117 AQ11 (RS) Contracting Officer's email address: SmithBW@efdlant.navy.mil - Telephone No. 757-322-4662					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remaining unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print) ROLAND S. MILES, Program Manager		15B. CONTRACT/ORDER NO. N82470-97-0-5000-0077		15C. DATE SIGNED 14 JAN 2002	
16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) BRENDA SMITH, Contracting Officer		16B. UNITED STATES OF AMERICA BY Brenda Smith		16C. DATE SIGNED 1-15-02	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			
EXCEPTION TO SF 30 APPROVED BY OIRM 11-84		30-105-04		STANDARD FORM 30 (Rev. 10-83) Prescribed by GSA FAR (48 CFR) 53.243	

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

N62470-97-D-5000  
007701  
Page 2 of 5

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

**Changes in Solicitation/Contract/Order Form**

The total cost has increased from \$4,182.00 by \$4,355.00 to \$8,537.00

**Changes in Section B**

**CLIN 0004**

The total CLIN cost has increased from \$4,182.00 by \$4,355.00 to \$8,537.00

The award fee has increased from \$244.00 by \$253.00 to \$497.00

The estimated/max cost has increased from \$3,938.00 by \$4,102.00 to \$8,040.00

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

N62470-97-D-5000  
007701  
Page 3 of 5

Changes in Section C

January 14, 2002

Engineering Field Activity, Chesapeake  
Naval Facilities Engineering Command  
Washington Navy Yard, DC

**STATEMENT OF WORK**

**SITE 41 REMEDIAL DESIGN REVIEW**  
Naval Surface Warfare Center (NSWC),  
Indian Head Division  
Indian Head, Maryland

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***1.0 INTRODUCTION/BACKGROUND***

**SITE 41 - SCRAPYARD**

**Site Location and Description**

Site 41 - Scrap Yard is located along the Mattawoman Creek just upstream from the Site 39 outfall. From the 1960s to 1988, electrical transformers were stored at the northwestern end of Site 41 prior to off-site disposal. Following an inspection conducted in 1981, 17 transformers were identified as either PCB contaminated or PCB containing (NEESA, 1983). These transformers were believed to have leaked and contaminated the soil in this portion of Site 41. Additionally, lead batteries were stored in the Site 41 scrapyard and may have released lead to the surface soils (E/A&H, 1994). Runoff from Site 41 flows southwest, into Mattawoman Creek, upstream of Site 39.

The Selected Remedy for Site 41 is soil removal with land use restrictions and shallow groundwater monitoring. There is the potential for small-scale explosives in the form of cartridge-activated devices (CADs) to be in the soil.

***2.0 REMEDIAL DESIGN REVIEW OBJECTIVES***

The Contractor shall review the 100% Remedial Design for Site 41 - Scrapyard. The Contractor shall provide comments on the proposed remedial design based on implementability and constructionability.

**TASKS:**

Task 1: Site visit

Task 2: Implementability and Constructionability Report

**DELIVERABLES:**

- Final Implementability and Constructionability Report

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

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007701  
Page 4 of 5

**POINTS OF CONTACT**

**Commanding Officer**  
**Engineering Field Activity Chesapeake**  
Attn: Jeff Morris, CH20C  
1314 Harwood Street, SE, Bldg 212  
Washington Navy Yard DC 20374-5018  
202-685-3279  
202-433-7018 (fax)  
[morrisjw@efaches.navfac.navy.mil](mailto:morrisjw@efaches.navfac.navy.mil)

**Indian Head Division,**  
**Naval Surface Warfare Center**  
Attn: Shawn A. Jorgensen, Code 046C, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
301-744-2265  
301-744-4180 (fax)  
[jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)

**ROICC Indian Head Division,**  
**Naval Surface Warfare Center**  
**NAVFACENGCOM Contracts**  
Building 351  
Indian Head, MD 20640-5504

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

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007701  
Page 5 of 5

Changes in Section G

Summary for the Payment Office

As a result of this modification, the total funded amount of the contract is increased by \$4,355.00 from \$4,182.00 to \$8,537.00

(Contract Level Funding)

AB: AB 17 02021804 KU2E 0252 62470 P 068732 2D RC2814 AA00C0019691 RCP  
N6247002RCC0814  
is increased by \$4,355.00 from \$0.00 to \$4,355.00



**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE U	PAGE OF PAGES 1   6
2. AMENDMENT/MODIFICATION NO. 02		3. EFFECTIVE DATE 17-Apr-2002		4. REQUISITION/PURCHASE REQ. NO. PR-5000-97-0077	
5. PROJECT NO. (If applicable)					
6. ISSUED BY COMMANDER, ATLANTIC DIVISION NAVFACENGCOM 1510 GILBERT STREET BUILDING N26 NORFOLK VA 23511-2699		CODE N62470		7. ADMINISTERED BY (If other than item 6)  See Item 6	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) OHM REMEDIATION SERVICES CORPORATION -- 5700 THURSTON AVE. SUITE 116B VIRGINIA BEACH VA 23465-3302				9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
				X 10A. MOD. OF CONTRACT/ORDER NO. NG2470-97-D-5000-0077	
				X 10B. DATED (SEE ITEM 13) 21-Sep-2001	
CODE 4V026		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 52.243-2, Changes - Cost-Reimbursement (AUG 1987)					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) RAC: SITE 41 SCRAP YARD, NAVSURFWARREN INDIAN HEAD, MD  This modification is issued in accordance with the prices established in P00009 dated October 1, 2001, for the contractor to prepare fee proposal and implementation plan for the Site 41 Scrap Yard Remediation at the Naval Surface Warfare Center, Indian Head, Maryland, all as directed by the Contracting Officer. This is a construction type requirement and subject to Davis Bacon General Decision No. MD020033 dated March 1, 2002, attached hereto and made a part hereof.  Fee proposal shall be submitted no later than May 1, 2002.  Copy to: EFA CHES CH20C (JM/JC) EV31LR EV31JR AQ11 AQ113 AQ117 AQ11 (FIS) DCAA  Contracting Officer's email address: smithbw@efdlant.navy.mil - Telephone No. 757-322-4594					
Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) BRENDA SMITH / CONTRACT SPECIALIST			
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <u>Brenda Smith</u> (Signature of Contracting Officer)		16C. DATE SIGNED 17-Apr-2002	
(Signature of person authorized to sign)					

EXCEPTION TO SF 30  
APPROVED BY OIRM 11-84

30-105-04

STANDARD FORM 30 (Rev. 10-83)  
Prescribed by GSA  
FAR (48 CFR) 53.243

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

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007702  
Page 2 of 6

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

Acceptance of this modification by the contractor constitutes an accord and satisfaction and represents payment in full for both time and money and for any and all costs, impact effect, and for delays and disruptions arising out of, or incidental to, the work as herein revised.

SUBMIT INVOICES FOR PAYMENT IN ACCORDANCE WITH THE CONTRACT. PAYMENT WILL BE MADE BY DEFENSE FINANCE AND ACCOUNTING SERVICE, OPERATING LOCATION OAKLAND, ATTN: CODE FPV, P.O. BOX 23870, OAKLAND, CA. NOT SUBJECT TO THE PROMPT PAYMENT ACT.

SUMMARY OF CHANGES

Changes in Solicitation/Contract/Order Form

The total cost has increased from \$8,537.00 by \$8,694.00 to \$17,231.00

Changes in Section B

CLIN 0004

The total CLIN cost has increased from \$8,537.00 by \$8,694.00 to \$17,231.00

The award fee has increased from \$497.00 by \$507.00 to \$1,004.00

The estimated/max cost has increased from \$8,040.00 by \$8,187.00 to \$16,227.00

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

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007702  
Page 3 of 6

Changes in Section C

**General Decision Number MD020033**

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General Decision Number MD020033  
Superseded General Decision No. MD010033

State: Maryland

Construction Type:  
HEAVY

County(ies):  
CHARLES

HEAVY CONSTRUCTION PROJECTS (Excluding Sewer and Water Lines)

Modification Number	Publication Date
0	03/01/2002

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

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007702  
Page 4 of 6

COUNTY(ies):  
CHARLES  
SUMD2014A 04/01/1990

	Rates	Fringes
CARPENTERS	13.01	1.55
CEMENT MASONS	12.47	2.02
LABORERS, UNSKILLED	9.54	1.43
POWER EQUIPMENT OPERATORS:		
Backhoes	12.51	1.62
Bulldozers	12.25	1.62
WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.		

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

**WAGE DETERMINATION APPEALS PROCESS**

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

N62470-97-D-5000  
007702  
Page 5 of 6

Branch of Construction Wage Determinations  
Wage and Hour Division  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U. S. Department of Labor  
200 Constitution Avenue, N. W.  
Washington, D.C. 20210

4.) All decisions by the Administrative Review Board are final.  
END OF GENERAL DECISION

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**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

N62470-97-D-5000  
007702  
Page 6 of 6

Changes in Section G

**Summary for the Payment Office**

As a result of this modification, the total funded amount of the contract is increased by \$8,694.00 from \$8,537.00 to \$17,231.00

(Contract Level Funding)

AC: AC 17 02021804 KU2E 0252 62470 P 068732 2D RC2849 AA00C0019691 RCP  
N6247002RCC0849  
is increased by \$8,694.00 from \$0.00 to \$8,694.00

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

N62470-97-D-5000  
007703  
Page 2 of 2

**SECTION SF 30 BLOCK 14 CONTINUATION PAGE**

**SUMMARY OF CHANGES**

**Changes in Solicitation/Contract/Order Form**

The total cost has increased from \$17,231.00 by \$1,204,959.00 to \$1,222,190.00

**Changes in Section B**

**CLIN 0004**

The total CLIN cost has increased from \$17,231.00 by \$1,204,959.00 to \$1,222,190.00  
The award fee has increased from \$1,004.00 by \$30,679.00 to \$31,683.00  
The estimated/max cost has increased from \$16,227.00 by \$1,174,280.00 to \$1,190,507.00

**Changes in Section SF 30**

Acceptance of this modification by the contractor constitutes an accord and satisfaction and represents payment in full for both time and money and for any and all costs, impact effect, and for delays and disruptions arising out of, or incidental to, the work as herein revised.

SUBMIT INVOICES FOR PAYMENT TO COMMANDER (CODE AQ118), LANTNAVFACENGCOM, 1510 GILBERT STREET, NORFOLK, VA 23511-2699. PAYMENT WILL BE MADE BY DEFENSE FINANCE AND ACCOUNTING SERVICE, OPERATING LOCATION OAKLAND, ATTN: CODE FPV, P.O. BOX 23870, OAKLAND, CA. NOT SUBJECT TO THE PROMPT PAYMENT ACT.

**Changes in Section G**

**Summary for the Payment Office**

As a result of this modification, the total funded amount of the contract is increased by \$1,204,959.00 from \$17,231.00 to \$1,222,190.00

**(Contract Level Funding)**

AD: AD 17 02021804 KUZE 0252 62470 P 068732 2D RC2860 AA00C0019691 RCP  
N6247002RCC0861  
is increased by \$1,204,959.00 from \$0.00 to \$1,204,959.00

**Enclosure 61**  
**Modifications 1, 2, and 3 for Delivery Order 0077**

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 03		3. EFFECTIVE DATE 26-Jun-2002		4. REQUISITION/PURCHASE REQ. NO. PR-5000-87-0077	
5. PROJECT NO. (if applicable)					
6. ISSUED BY COMNAVSEA ATLANTIC DIVISION NAVFACBINGDOM 1210 GILBERT STREET BUILDING 100 NORFOLK VA 23511-5888		7. ADMINISTERED BY (if other than item 6)  See Item 6			
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) OHA REMEDIATION SERVICES CORPORATION 6708 THURSTON AVE. SUITE 1100 VIRGINIA BEACH VA 23465-3332		9A. AMENDMENT OF SOLICITATION NO.		9B. DATED (SEE ITEM 11)	
CODE 4V026		FACILITY CODE		X 10A. MOD. OF CONTRACT/ORDER NO. 125470-87-3-5000-0077	
				X 10B. DATED (SEE ITEM 13) 21-Sep-2001	
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended <input type="checkbox"/> is not extended.					
Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Item 6 and 14, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided such telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (if required) See Schedule					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in pricing office, appropriation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.105(b).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 62.243-2, Changes - Cost-Plus-Fee Contract (AUG 1987)					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/broadcast subject matter where feasible.) R.A.C.: SITE 41 SCRAP YARD REMEDIAL ACTION, NAVSUPWARGEN INDIAN HEAD, MARYLAND  This modification to Task Order 0077 is issued to furnish all labor, materials, equipment, supervision, travel and subsistence necessary for the contractor to perform remedial activities at Site 41, Scrap Yard, Naval Surface Warfare Center, Indian Head, Maryland, all as directed by the Contracting Officer. Your proposal dated May 1, 2002 is hereby accepted. This is a construction type requirement and subject to Davis Bacon WD No. MD020033 dated March 1, 2002.  The Task order completion date is February 28, 2003.  copy to: EPA CHES CR200 (JMAC) EVS1LR EVS1JR AQ11 AQ113 AQ117 AQ11 (FIS) DCA  Contracting Officer's email address: em1bhw@elidant.navy.mil Telephone No. 757-322-4394					
Submit in sealed envelope, all items and conditions of the documents referenced in Item 14 or 15a, as appropriate, remain unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print) Roland S. Moreau, Program Manager		15B. DATE SIGNED 26 June 2002		15C. SIGNATURE OF CONTRACTING OFFICER (Type or print) Shirley Smith, Contracting Officer	
15D. SIGNATURE OF CONTRACTING OFFICER (Signature of person authorized to sign)		15E. DATE SIGNED 26 June 2002		15F. SIGNATURE OF CONTRACTING OFFICER (Signature of Contracting Officer)	
APPROVED BY OHA 11-84		30-105-04		STANDARD FORM 30 (Rev. 10-87) Prescribed by GSA FAR (48 CFR) 53.243	





***OHM Remediation Services Corp.***

*LANTDIV Program Management Office  
5700 Thurston Avenue, Suite 116B  
Virginia Beach, VA 23455-3302  
Tel. 757.363.7190  
Fax. 757.363.7222*

*A Member of The IT Group*

May 1, 2002

Ms. Brenda Smith, Code AQ113  
Contract Specialist  
Atlantic Division, NAVFACENGCOM  
LRA, Building A, Room 3700  
6506 Hampton Boulevard  
Norfolk, VA 23508

RE: Request for Modification No. 003, Task Order 077  
Site 41 – Scrap Yard, Naval Surface Warfare Center, Indian Head, Maryland  
Contract No. N62470-97-D-5000; OHM/IT Project No. 831866

Dear Ms. Smith:

OHM Remediation Services Corporation (OHM), a member of the IT Group, is pleased to submit this cost proposal to conduct remedial activities at the Site 41- Scrap Yard, NSWC Indian Head, Maryland. This cost proposal was prepared in response to the Statement of Work and Request for Proposal dated April 18, 2002. This fee proposal has been prepared in accordance with the Scope of Work, the Design Documents, and the Contract Documents. The following assumptions were made:

- The anticipated task order completion date is February 28, 2003
- IT has used its FY02 Forward Pricing Rates in the development of this proposal

The remedial action at Site 41 includes the removal of PCB-contaminated soil from the concrete pad, cleaning and sealing the pad with asphalt, the removal of railroad tracks and PCB metals contaminated soil adjacent to the pad, the installation of a new access road, and site restoration and seeding of all disturbed areas around the pad. The soil removed from the pad and adjacent areas will require mechanical screening to remove Cartridge-Activating Devices (CADs). These CADs will be segregated from the soil and disposed of by Base Personnel. The remaining waste streams (soil and railroad debris) will be the responsibility of OHM.

This proposal has been prepared based on the information contained in the Design Documents submitted by TetraTech. These documents include the 100 percent Remedial Action Design and Draft Verification and Sampling Plan. The finalization and submittal of these documents will be provided by TetraTech in the near future. However, several previous discussions have taken place concerning the changes that may be implemented into the final documents. OHM has included a few of the significant changes that may be

incorporated. These changes/deviations from the existing documents are identified for the specific field activities listed below:

### **General Assumptions**

- The fee proposal costing and schedule are based on working 10 hours per day, 5 days per week.
- The fieldwork is estimated to begin the first week of September 2002 and last for 9 ½ weeks.

### **WBS-03031600 Pad Soil Removal**

It is estimated that 1,350 cubic yards of soil exists on the pad. Approximately 1,000 cubic yards are assumed to be hazardous and 350 cubic yards to be nonhazardous. It is also assumed that all metal debris will be removed from the pad (excluding CADs) by others prior to mobilization. In addition, if the pad needs to remain in service during the remedial action, the Base will provide roll-offs for the day-to-day scrap metal that is received from the Base. OHM will provide labor and equipment to move the roll-offs as needed to complete the pad soil removal and cleaning.

### **WBS-03040000 Concrete Pad Capping**

A 2-inch asphalt cover will be placed over the entire pad. This assumes that the pad will still be contaminated after the cleaning and the concrete is structurally sound and able to support the asphalt placement without any repairs or concrete removal.

### **WBS-03003030 Adjacent Soil Excavation**

In order to minimize field standby time, OHM is assuming that the top six inches of soil within the contamination zone around the pad will require removal (880 cubic yards). This is different from the design report, which shows selective excavations, followed by sampling (by others), then additional excavation if required. Since the significant majority of shallow sample results indicate removal, OHM will initially remove the entire top six inches for disposal. Then selective excavation will continue once the sampling and analysis is complete. For estimating purposes, the additional selective excavation areas and volumes are consistent with the design report quantities. In addition, the railroad ballast and deeper excavated soil will not require mechanical screening for CADs.

**WBS-20004000 Site Restoration**

For the purposes of this estimate, it is assumed that the existing site fence that will be removed (840 linear feet) will not be suitable for replacement. New fencing will have to be installed in its place along with the new proposed fencing for other areas of the site.

If you have any questions or need additional information, please call me at 757-318-5123 or Dan Pringle at 412-380-6248.

Sincerely,

A handwritten signature in black ink, appearing to read "Roland Moreau", with a long horizontal flourish extending to the right.

Roland Moreau, PE  
Program Manager

RM:amm

Cc: James Dunn  
Lt. Russ Hime (ROICC)  
Jeff Morris (EFA CHES)  
Shawn Jorgensen (IH)  
Dan Pringle

# Enclosure 62 – Modification 4 to Delivery Order 077.

JAN-08-2003 10:05

P.01

*Pass to Linda Goforth*

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE U	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 04		3. EFFECTIVE DATE 05-Dec-2002	4. REQUISITION/PURCHASE R.BQ. NO. PR-8000-07-0077		5. PROJECT NO. (if applicable)
6. ISSUED BY COMMANDEER, ATLANTIC DIVISION NAVPACINSOCCOM 1819 GILBERT STREET BUILDING 102 MORFOLK VA 23061-3888		CODE N02470	7. ADMINISTERED BY (if other than item 6) See Item 6		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) ONAF REMEDIATION SERVICES CORPORATION 6700 THURSTON AVE. SUITE 1100 VIRGINIA BEACH VA 23462-3302			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X 10A. MOD. OF CONTRACT/ORDER NO. N02470-07-0-8000-0077		
			X 10B. DATED (SEE ITEM 13) 21-Sep-2001		
CODE 4V028		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above amendment is considered as not forth in Item 14. The hour and date specified for receipt of offer. <input type="checkbox"/> is required. <input type="checkbox"/> is not required. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 12, and attaching copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If the date of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided such telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (if required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in pricing, office, transportation data, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.105(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 82.243-2, Changes - Cost-Plus-Firm-Fixed-Fee (AUG 1987)					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return 1 copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCP section headings, including solicitation/contract subject matter where feasible.) RAC: RA, SITE 41, SCRAP YARD, NSWC INDIAN HEAD, MD  This no cost modification to task order 0077 is issued to extend the period of performance through June 21, 2003. All other terms and conditions remain unchanged.  SUBMIT INVOICES FOR PAYMENT IN ACCORDANCE WITH THE CONTRACT. PAYMENT WILL BE MADE BY DEFENSE FINANCE AND ACCOUNTING SERVICE, OPERATING LOCATION OAKLAND, ATTN: CODE FPV, P.O. BOX 28870, OAKLAND, CA. NOT SUBJECT TO THE PROMPT PAYMENT ACT.  Copy to: EPACHEB (J. Morris) EV310W EV31JPR AQ11 AQ113 AQ117 AQ11 (FIS) DCAA  Contracting Officer's email address: eralibow@edgiant.navfac.navy.mil - Telephone No. 757-322-4584					
15A. NAME AND TITLE OF SENDER (Type or print) Roland S. Morgan; Program Manager					
15B. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) BRENDA SMITH Contracting Officer					
15C. DATE SIGNED 5 Dec 2002		15D. UNITED STATES OF AMERICA BY <i>Brenda Smith</i> (Signature of Contracting Officer)		15E. DATE SIGNED 12/5/02	
15F. CONTRACTING OFFICER <i>Roland S. Morgan</i> (Signature of person authorized to sign)					
EXCEPTION TO 3F 30 APPROVED BY OIRM 11-54		30-105-04		STANDARD FORM 30 (Rev. 10-83) Prescribed by GSA FAR (48 CFR) 53.243	

## **Enclosure 62 – Modification 4 to Delivery Order 077.**

JAN-08-2003 10:06

P.02

N62470-97-D-5000  
007704  
Page 2 of 2

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

### **SUMMARY OF CHANGES**

Changes in Section SF 30

Acceptance of this modification by the contractor constitutes an accord and satisfaction and represents payment in full for both time and money and for any and all costs, impact effect, and for delays and disruptions arising out of, or incidental to, the work as herein revised.

Changes in Section G

Summary for the Payment Office

The total funded amount of the contract remains unchanged.

**Enclosure 62 – Modification 4 to Delivery Order 077.**

JAN-08-2003 10:06

P.03



**DEPARTMENT OF THE NAVY**

ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
1510 GILBERT ST  
NORFOLK, VA 23511-2699

TELEPHONE NO:

757-322-4594

IN REPLY REFER TO:

N62470-97-D-5000

AQ113

December 5, 2002

Mr. Roland Moreau  
OHM Remediation Services Corporation  
5700 Thornton Avenue, Suite 116B  
Virginia Beach, Virginia 23455-3302

Dear Mr. Moreau:

SUBJECT: CONTRACT N62470-97-D-5000, REQUEST FOR PROPOSAL

It is our intention to order against the referenced contract to provide a detailed proposal for modification of Task Order 0077, Site 41 UXO Demilitarization at the Naval Surface Warfare Center, Indian Head, Maryland. The Scope of Work, enclosure (1), is forwarded to assist you the preparation of your proposal. Work under this proposal is subject to the Davis Bacon Act, General Decision No. MD020033 dated March 1, 2002.

Please submit an electronic copy plus two hard copies of your fee proposal and other forms you must complete as appropriate December 19, 2002. The proposal should be submitted with sufficient detailed supporting information to allow negotiation on a cost plus award fee basis. Please submit your proposal to this office to Contract Specialist, Ms. Brenda Smith, Code AQ113; email smithbw@efdlant.navy.mil.

This letter should not be construed as a notice to proceed with performance of any construction work but is a request for proposal only. Only a Contracting Officer is authorized to obligate the Government under this contract. All information contained in this letter should not be divulged to persons other than those having a definite "Need to Know" without prior approval in writing from this Command.

If you have any questions, contact the undersigned at (757) 322-4594.

Sincerely,

BRENDA SMITH  
Contract Specialist  
Cost Contracts Branch  
Contracts Office  
By direction of the Commander

Enclosure: 1. Scope of Work December 4, 2002

Copy to: EFA CHES CH21EC (JM)

**Quality**

**Enclosure 62 – Modification 4 to Delivery Order 077.**

JAN-08-2003 10:06

P.04

NG2470-97-D-5000  
AQ113  
December 5, 2002

Blind copy to:  
EP3LEW  
AQ113  
TID.0877 file

TOTAL P.04

**Enclosure 63**  
**DRMS-I 4160.14, VOL II, CH 2 Sec1**

**DRMS-I 4160.14, Volume II, Chapter 2, Section 1**

5. Match the DTID against the property being turned in.

6. Property Acceptability

a. NSN or LSN (see B2 above).

b. Unit of issue.

c. Total quantity. If quantity does not match, attempt to resolve between the DRMO and the generator, any discrepancies over \$800 or any discrepancy of pilferable/sensitive, hazardous or MLI/CCLI property, circle the incorrect quantity and enter actual quantity in Block 10.

If the Central DRMO Chief/Site Manager determines that the time required counting the property not be justified, generator count may be accepted.

Exceptions to actual counts are limited to:

- Items batch-lotted or being batch-lotted.
- Large quantities of small items in other than original pack.
- Large quantities of items in original pack, e.g., use of box count.

d. DEMIL code/certifications.

- If DEMIL code is missing, place item aside and contact Generator Activity for resolution/rejection.
- Determine if inert certificate is required. If a certificate is required, ensure that it is attached to the original copy of the DTID, and the two signatures correspond to the list provided by the generator. If there is no certificate, property will be rejected.
- If DEMIL was accomplished by the generator prior to turn-in a completed and valid DEMIL certificate with two signatures must accompany the property.
- Review the validity of DEMIL coding and to challenge coding suspected to be incorrect in accordance with DRMS-I 4160.14, Volume VII.
- If invalid DEMIL Code reject.
- If generator DEMIL is performed and the result is scrap residue, no certification is required upon turn-in. If generator DEMIL results in the turn-in of usable components, the generator is required to provide the DEMIL certificate.

e. Disposal Authority Code.

f. Unit price.

g. Generator's DoDAAC. The DoDAAC/FEDSTRIP code on disposal turn-in or requisitioning documents (electronic or hard copy) must be listed in the official DoD Activity Address File on the DAASC web site: <http://www.daas.dla.mil>. Turn-in documents not having correct DoDAACs/FEDSTRIPs will be rejected in accordance with DRMS-I 4160.14, Volume II, Chapter 2, Paragraph B3, Rejecting Property. If there is no entry in the TAC 3 address location on the DAASC web site, but the TAC 1 shows a valid address do not return to the generating activity. If there is no TAC 3 address, it is to be considered the same as the TAC 1. Because DAISY will not process without a TAC 3, DRMOs are to contact DRMS-RF for a special load into DAISY. Special loads are also required for FMS/HAP organization, and in BOSS for hazardous waste disposals. For the most expedient response, these requests should be e-mailed to [dodaac@mail.drms.dla.mil](mailto:dodaac@mail.drms.dla.mil) with an appropriate comment; e.g., this DoDAAC needs a TAC 3 update in the DAISY system.

AF activities using DoDAACs beginning with "FY" are required to establish accountability through the base/depot accountable supply officer. These DoDAACs have been established as "ship to" addresses only and are not authorized for receiving or requisitioning property. Generators with questions in this regard should be directed to the AF DoDAAC Point of Contact (POC) shown on the POC list at the Logistics web site under "Invalid DoDAACs".

h. Assign a Disposal Condition Code (DCC) and enter on the DTID. Challenge or change incorrect condition codes as follows:



**Enclosure 64.**  
**Appendix 13-A, Safety Manual**

IHDIVNAVSURFWARCENINST 5100.22G

**Appendix 13-A**

**INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER, INDIAN HEAD, MD  
SUMMARY CONTRACTOR AND SAFETY REQUIREMENTS FOR ALL  
MAINTENANCE, REPAIR, OR CONSTRUCTION**

1. Prior to starting any maintenance, repair, or construction, the contract job superintendent must meet with an IHDIV, NSWC Safety Department representative to become familiar with IHDIV, NSWC safety regulations.
2. Authorization (work permits) to commence scope of contract will be obtained from the IHDIV, NSWC Safety Department via the contracting officer/representative.
3. Smoking, carrying matches, lighters, or other flame- or spark-producing items on personnel or in vehicles or other carriers is prohibited in the restricted area of IHDIV, NSWC. Smoking areas will be designated by the Safety Department upon request via the contracting officer. Approval will be based on the specific operational safety concerns within the area requested.
4. The use of welding equipment, tar pots, gas burners, etc., is prohibited unless authorized by the Safety Department. Once approved, those instruments should be lighted by use of striker if possible. If matches are required within the restricted area, they will be provided by the Safety Department—for use only as authorized—to the contract superintendent. Note: Liquefied petroleum gas is not allowed within the explosive areas of IHDIV, NSWC.
5. All open-flame work will be secured 30 minutes prior to leaving the work area unless a watchman is on duty for at least 30 minutes after the end of the work period. At no time will open-flame burning for debris disposal be authorized.
6. Prior to any maintenance or repair to explosive-contaminated equipment, such equipment must be inspected by the Safety Department and by the IHDIV, NSWC area supervisor. All explosive-contaminated materials must be decontaminated by IHDIV, NSWC methods and supervision prior to removal from the restricted area.
7. All traffic rules, regulations, and control devices must be adhered to. Speed limits as posted prevail. Intraplant area roadways require 15 mph unless posted otherwise, and 10 mph must be maintained on Nobel Road. All other roads require 25 mph unless otherwise posted.
8. Only necessary approved contractor vehicles will be allowed in the restricted area. These must be equipped with adequate exhaust systems and maintained in good mechanical and physical condition at all times. For all vehicles entering into the explosives areas of IHDIV, NSWC, safety inspections will be required prior to receiving a vehicle pass from the Safety Department.
9. Blocking of roadways with equipment will not be allowed at any time. Securing roadways with barricades will be accomplished only upon approval of the Safety Department and notification of the Security and Fire Protection Division. Where possible, an adequate fire lane must be provided around approved obstruction(s) for emergency equipment.
10. Securing of plant utilities (air, steam, water, etc.) will be accomplished only upon approval of the Utility Division and the affected area supervisor and then only when written permission has been obtained via the contracting representative.

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**Enclosure 64.**  
**Appendix 13-A, Safety Manual**

IHDIVNAVSURFWARCENINST 5100.22G

17. DESCRIPTION OF DAMAGE TO EQUIPMENT, MATERIAL OR PROPERTY (GOV'T OR PRIVATE)	ESTIMATED OR ACTUAL DAMAGE COST	
18. NUMBER OF CASUALTIES (SPECIFY MIL. CIV. CONTRACTOR OR OTHER)		
19. NUMBER UNITS INVOLVED OUT OF TOTAL BEING PROCESSED AT TIME OF INCIDENT/ACCIDENT		
20. NET WEIGHT OF EXPLOSIVES INVOLVED		
21. DESCRIBE ANY CLIMATIC OR ELECTROMAGNETIC ENVIRONMENTAL CONDITIONS INVOLVED		
22. COMMENTS (CAUSATIVE FACTORS, ADEQUACY OF OPERATING INSTRUCTIONS AND SAFETY PRECAUTIONS)		
23. STATEMENT WHETHER OR NOT INVESTIGATION WILL BE IN ACCORDANCE WITH JAG MANUAL		
24. UNSAFE CONDITION/UNSAFE ACT		
25. TYPE OF MATERIAL HANDLING EQUIPMENT INVOLVED	IDENTIFICATION NO.	
26. CORRECTIVE ACTION TAKEN/RECOMMENDED		
27. SIGNATURE OF PERSON PREPARING REPORT	RANK/GRADE	DATE
28. REVIEW/COMMENTS OF DIVISION DIRECTOR		
29. REVIEW/COMMENTS OF DEPARTMENT		
30. REVIEW/COMMENTS OF SAFETY DIRECTOR		

GPO 811-274

**Enclosure 64.**  
**Appendix 13-A, Safety Manual**

IHDIVNAVSURFWARCENINST 5100.22G

- d. Windshield and other window glass must be free of defects. Windshields must be provided on standard equipped vehicles.
  - e. Rearview mirrors must be provided and free of defects.
  - f. All standard lights must be provided, operative, and free of defects—including lens coverings.
  - g. Exhaust systems must be provided, free of defects and properly supported.
  - h. Fuel systems must not indicate evidence of defects.
  - i. Brakes must be operative without drag, including serviceable emergency brakes.
  - j. Tires must have ample tread and be free of defects.
  - k. Electrical wiring must not have exposed surfaces or be loosely supported.
  - l. Body conditions must be well maintained with no loose or jagged edges, excessive grease or oil on engine, and all standard features provided and operable.
  - m. Where applicable, inspection will include other such items as gauges, thermometers, controls, relief valves, piping, mechanical locks, limit switches, connectors, and other safety-related devices associated with vehicles and equipment admitted to the activity.
19. Contract trailers will be equipped with polycarbonate windows when spotted within the quantity-distance arcs of explosive operating areas.
20. Additional requirements will be designated on the work permit based upon the contract scope and IHDIV, NSWC area involved.
21. In the event of mishap or injury involving contract personnel, operations, or equipment aboard this activity, the contractor will be responsible for preparing and submitting an investigation report (NDW/NAVORDSTA 5100/10) to the Safety Department (Code 04) within 2 working days after occurrence. The contracting officer has provided a copy of the form to the contractor at the pre-performance meeting. Additional copies are available from the contracting officer upon request.

Safety Department Representative

\_\_\_\_\_ Date

Name of Contract

\_\_\_\_\_ Contract Number

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**Enclosure 64.**  
**Appendix 13-A, Safety Manual**

IHDIVNAVSURFWARCENINST 5100.22G

11. Rendering fire protection devices inoperable will be done only with the approval of the Fire Chief or his designated acting chief.

12. All roadways and walkways will be kept clear of debris at all times. Cleaning of same will be accomplished by the contractor at least daily or more frequently as conditions necessitate.

13. No powder-actuated tools or devices may be used.

14. Contract employees are restricted from entering buildings not included in the contract. An exception may be made for lunchrooms and change houses when authorized by the contracting officer and with the approval of the area supervisor.

15. Fuels, oils, and lubricants:

a. Refueling of equipment and vehicles with flammable liquids will be done in areas designated by the Safety Department. All equipment used in flammables handling or operations must be of an approved type per Underwriters' Laboratory or Factory Mutual certifications. Adequate fire protection devices must be on the scene during refueling operations.

b. All spills must be reported to the Fire Protection Division (Code 103).

c. Used oil, oil filters, and empty oil cans will be turned into the Property Disposal Office (Code 1122) for recycling/disposal.

16. Hazardous materials:

a. The contractor must inform the IHDIV, NSWC Safety Department and Public Works Department representatives of all contractor-owned hazardous material that will be used, stored, or handled at IHDIV, NSWC. If IHDIV, NSWC employees are exposed to these materials or potential for exposure exists, IHDIV, NSWC employees shall:

- ✓ (1) Be informed and trained as required by Chapter 24.
- (2) Have a material safety data sheet accessible at the workplace for each material used for their review.

b. The contractor shall ensure that contractor employees have been informed/trained about the identification and hazards of the hazardous materials used at IHDIV, NSWC.

17. No two-way radio transmitting devices may be used while within the restricted area of IHDIV, NSWC.

18. Vehicle and construction equipment inspections include the appropriate factors listed below for safe use and conditions. Any one discrepancy is disqualifying for entry into the restricted area.

a. Steering mechanisms must be free of defects or excessive play.

b. Horns and warning devices must be operative.

c. Windshield wipers must be operative.

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**Enclosure 64.**  
**Appendix 13-A. Safety Manual**

IHDIVNAVSURFWARCENINST 5100.22G

**Appendix 13-B**

INVESTIGATION REPORT NDW-NAVORDSTA-5100/10 (Rev. 89)									
TO SAFETY DEPARTMENT, CODE 04					FROM				
1. TYPE OF REPORT									
<input type="checkbox"/> INCIDENT		<input type="checkbox"/> INJURY		<input type="checkbox"/> MATERIAL DAMAGE		<input type="checkbox"/> MOTOR VEHICLE			
<input type="checkbox"/> ACCIDENT		<input type="checkbox"/> FATALITY		<input type="checkbox"/> FIRE		<input type="checkbox"/> MATERIALS HANDLING			
2. DATE/TIME OF OCCURRENCE									
SHIFT <input type="checkbox"/> DAY <input type="checkbox"/> NIGHT	HOUR	DATE	MONTH	YEAR	DAY OF WK	3. PLACE OF OCCURRENCE			
						<input type="checkbox"/> ABOARD STATION DESCRIBE LOCATION: <input type="checkbox"/> LV/LIB <input type="checkbox"/> OTHER			
4. NAME OF INJURED/FATALITY (FIRST, MIDDLE, LAST)						HOME ADDRESS		HOME PHONE	
5. SERVICE/BADGE NO. SOCIAL SECURITY NO.				6. SEX	7. AGE	8. <input type="checkbox"/> MIL-TIME IN SERVICE <input type="checkbox"/> CIV-MONTHS EXPERIENCE		9. RANK/GRADE	
10. DUTY STATUS (MIL) <input type="checkbox"/> USN <input type="checkbox"/> USNR									
<input type="checkbox"/> ACTDU <input type="checkbox"/> ACTDU/TRA <input type="checkbox"/> DRILL <input type="checkbox"/> LV/LIB <input type="checkbox"/> UA <input type="checkbox"/> TRAVEL <input type="checkbox"/> OTHER									
11. DUTY STATUS (CIV) <input type="checkbox"/> EMPLOYEE <input type="checkbox"/> CONTRACTOR									
<input type="checkbox"/> REGULAR <input type="checkbox"/> TRAVEL <input type="checkbox"/> TEMPORARY <input type="checkbox"/> UNAUTHORIZED <input type="checkbox"/> OTHER									
12. OCCUPATIONAL <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> QUESTIONABLE (IF NO OR QUESTIONABLE, EXPLAIN BELOW)									
13. GIVE COMPLETE DESCRIPTION OF OCCURRENCE									
14. NAME OF WITNESS									
BADGE NO.									
HOME ADDRESS									
15. SUPERVISOR IN CHARGE									
16. COMPLETE NOMENCLATURE (MIL, MOD, LOGISTIC, DOD, FSN)									

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**Enclosure 64.**  
**Appendix 13-A. Safety Manual**

IHDIVNAVSURFWARCENINST 5100.22G

I have received, read, and understand the requirements of this appendix.

Contractor	Signature	Date

COPY TO:  
CONTRACTOR—ORIGINAL  
SAFETY DEPARTMENT (04)—1  
PUBLIC WORKS DEPARTMENT (09)—1

**Enclosure 68.**  
**OP 5 2-1.14.7**

**NAVSEA OP 5 VOLUME 1 SEVENTH REVISION**

2-1.14.4. Standard Operating Procedures. Written procedures in accordance with paragraph 2-1.1 shall be prepared in advance for routine operations in contaminated areas.

2-1.14.5. Tagging and Marking Contaminated Items. When items which have been contaminated with ammunition and explosives are transferred between activities or from one area of the activity to another, or placed in standby status, they shall be tagged and marked in the following manner:

2-1.14.6. Tagging. A decontamination tag, DD Form 2271 or equivalent, indicating methods, type, and degree of contamination, and restrictions on handling must be attached to each item, as appropriate. Safety representatives are responsible for inspecting items on site and providing written verification of the degree of contamination. When the degree of contamination changes, the old tag shall be replaced with a new tag to show the latest status of the item and all documents shall be changed to reflect the item's revised status. When the item is placed into service, these tags shall be removed.

2-1.14.7. Marking. In addition to tagging, each contaminated item being transferred or placed in standby status shall be conspicuously marked with yellow X's and O's as follows:

- a. XXXXX - Item completely decontaminated; is entirely safe and may be released for general use.
- b. XXX - Item examined and cleaned by approved procedures and no contamination can be visually noted on accessible surfaces or in concealed housings, etc. It is not safe to be treated with open flame, high temperature heating devices, cutting devices, or hammering devices.
- c. X - Item partially decontaminated. Marking temporary, to be followed by further decontamination process.
- d. O - Articles, equipment or buildings that were never contaminated and do not pose an explosive hazard. It is safe to conduct welding, drilling, or sawing, or to release to the general public.

Use another contrasting color when the item to be marked is painted yellow. When the degree of contamination changes, markings shall be changed to show the status of the item, and all documents shall be changed to correspond. When the item is placed into service, markings shall be obliterated.

2-1.14.8. Real Property Contaminated with Ammunition, Explosives, or Chemical Agents. Every means possible shall be used to protect personnel and the general public from exposure to hazards from contaminated real property currently or formerly under DOD ownership or control. Such real property includes manufacturing areas, firing and impact ranges, and waste collection or disposal areas such as pads, pits, basins, ponds, streams, and burial sites. Real property that is known to be contaminated with ammunition, explosives, or chemical agents must be decontaminated with the most appropriate technology to ensure protection of the public

**Enclosure 69. Invoice for Scrap Metal in Dumpster**

Date 11/21 **A & B Trucking**  
301-899-1201 Acct. # \_\_\_\_\_  
Co. Name NSWC Ticket **15073**  
Address \_\_\_\_\_ Ph. # \_\_\_\_\_  
Job Name Indian Head Base

TYPE CONTAINER	NO. OF PULLS	PRICE
<input checked="" type="checkbox"/> Open Top <input type="checkbox"/> 20YD		\$
<input type="checkbox"/> 30YD <u>delivered</u>		\$
<input type="checkbox"/> 40YD <u>cut through</u>		\$
<input type="checkbox"/> Compactor <input type="checkbox"/> 20YD		\$
<input type="checkbox"/> 30YD <u>up to top</u>		\$
<input type="checkbox"/> 40YD <u>loaded from</u>		\$
<input type="checkbox"/> Delivery <input type="checkbox"/> Relocate <u>12-30-23</u>		\$
<input type="checkbox"/> Pull & Keep		\$
Landfill Name _____	Fee	\$
<input type="checkbox"/> Unable to Service	TOTAL	\$

x A. Perry x 12 x Calvin Early  
Driver Signature Truck # Cust. Signature  
Time \_\_\_\_\_ Key Operator \_\_\_\_\_

**INVOICE**  
THE COMPANY IS NOT RESPONSIBLE FOR DAMAGE TO  
CURBING, SIDEWALKS, PAVEMENT OR LAWNS.





# DEPARTMENT OF THE NAVY

ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
1510 GILBERT ST  
NORFOLK, VA 23511-2699

TELEPHONE NO:

757-322-4594

IN REPLY REFER TO:  
N62470-97-D-5000  
AQ113  
16 Oct 01

From: Ms. Brenda Smith, Contracting Officer, Atlantic Division, Naval Facilities Engineering Command  
To: Mr. Jeff Morris, Engineering Field Activity Chesapeake Division, Naval Facilities Engineering Command (Code CH20C)

Subj: APPOINTMENT AS NAVY TECHNICAL REPRESENTATIVE

Ref: (a) DFARS 201.602-2

1. Pursuant to reference (a), you are hereby appointed as the Navy Technical Representative (NTR), Work Plan Phase, for:

CONTRACT NUMBER and TITLE: N62470-97-D-5000, Multi-Contaminant Environmental Remedial Action Contract

CONTRACT TASK ORDER: 0077, Remedial Action, Site 41, Naval Surface Warfare Center, Indian Head, Maryland

CONTRACTOR: OHM Remediation Services Corporation

COTR: Ms. Karen Wilson, Code EV31KEW, phone: 757-322-4817

2. As an NTR, your duties include functioning as a technical representative to assist the appointed Contracting Officer's Technical Representative (COTR) in the administration of the contract task order cited above; providing technical direction and discussion in coordination with the COTR as necessary with respect to the specification or statement of work; and monitoring the performance of work under the contract. You are to perform your duties in accordance with reference (a) and any amplifying instructions provided herein or provided in writing by the contracting officer at a later date.

3. In accomplishing your duties as an NTR you are cautioned to ensure that the contract does not become a personal services contract through your actions or the actions of other government personnel who may assist you in the performance of your duties.

4. You are responsible for bringing to the attention of the appointed COTR and the functional code for whom the work is being performed, any significant deficiencies with respect to contractor performance or other actions which might jeopardize contract performance.

5. You are not authorized, either by this letter, or by reference (a), to take any action, either directly or indirectly, that could result in the change of pricing, quantity, quality, place of performance, delivery schedule, or any other terms and conditions of the contract/task order, or to direct the accomplishment of effort which would exceed the scope of the basic contract/task order. Whenever there is the potential that discussions may impact areas as described above, contact the appointed COTR for guidance.

6. Specific duties are as follows:

a. Provide the COTR with timely input regarding technical clarification for the statement of work, possible technical direction to provide the contractor, and recommended corrective actions.

**Quality Performance ... Quality Results**

Subj: APPOINTMENT AS NAVY TECHNICAL REPRESENTATIVE

- b. Review the contractor plan for conducting specific tasks, work, deliverables, and identify problematic areas to the COTR.
- c. Review contract/task order requirements, recommend acceptance/rejection, and provide the COTR with documentation to support the recommendation.
- d. Conduct meetings with the contractor (and LANTDIV as appropriate) regarding performance, quality control, health and safety, scheduling of work, and other subjects as necessary on individual task orders assigned.
- e. Participate in the Award Fee Plan by providing evaluations of the contractor's performance in accordance with the Award Fee Plan.
- f. Coordinate the contractor's access to the job site, including security passes, utilities, etc.
- g. Provide technical direction and clarification to the contractor on problems encountered on individual task orders. Notify the COTR and receive guidance as appropriate.
- h. Identify contractor deficiencies to the COTR.
- i. Identify noncompliance with contractor reporting requirements and other work plan requirements to the COTR.
- j. Coordinate the review and approve contractor's site specific Health and Safety Plan, CQC/QA plans, administrative/management plans, and others as specified in the task order.
- k. Review contractor status/progress reports on the applicable contract/task orders, identify deficiencies to the COTR, and provide the COTR with recommendations regarding acceptance/rejection and/or government technical clarification requests.
- l. Report contractor progress for task order tasks monthly to the COTR.
- m. Review invoices and provide the COTR with recommendations to facilitate COTR certification of the invoices.
- n. Assist in the preparation of the final report on contractor performance for the applicable contract/task order in accordance with the format and procedures prescribed by the COTR.
- o. Attend post-award conferences and report to the COTR on the contractor's readiness to perform in accordance with the terms of the contract/task order.
- p. Keep station Environmental Coordinator informed of task order status and notify them of potential problems.
- q. Establish and maintain appropriate files. Prepare/review field monitoring reports.
- r. Ensure the contractor conforms to all Navy regulations or guidance and other appropriate federal, state, and local laws and procedures that govern the contract/task order.
- s. Assure that appropriate and timely action is taken to process technical correspondence.

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t. Monitor, or cause to be monitored, contractor performance through on-site observation of the contractor's employees performing under the contract and review timecards/sheets or labor distribution schedules to make sure that labor hours are charged properly.

u. Conduct surveillance of contractor performance to determine if the percentage of work performed reasonably corresponds to the percentage of funds expended, alerting the COTR of any possible difficulties.

v. In the event of contractor delay, or failure to perform, determine the cause, and make recommendations for appropriate corrective and/or preventive measures to the COTR.

w. Promptly furnish the COTR with any contractor or technical code request for change, deviation, or waiver to include timely submission of supporting analysis and other required documentation.

x. Responsible for evaluating contractor's performance and submitting written performance evaluations to the COTR.


y. Participate in task order negotiations and provide technical evaluation of contractor proposals, as requested by the contracting officer.

7. You are assigned the above listed responsibilities to assist and support the COTR but you do not have the authority to approve and accept final work without prior approval of the COTR. Any technical direction/clarification shall be in writing with a copy provided to the COTR.

8. The duties and responsibilities set forth herein are not intended to be all inclusive. As specific individual situations arise that have not been covered or that have created a question, bring these to the attention of the appointed COTR and obtain advice on how to proceed in the best interest of the government.

9. This appointment will remain in force and effect, unless revoked or terminated, through the life of the contract. If for any reason it becomes necessary to terminate your appointment, including separation or reassignment from the requiring activity, you shall promptly notify the contracting officer to request termination of the appointment and relief from your duties as NTR and to permit timely selection and designation of successor NTR.

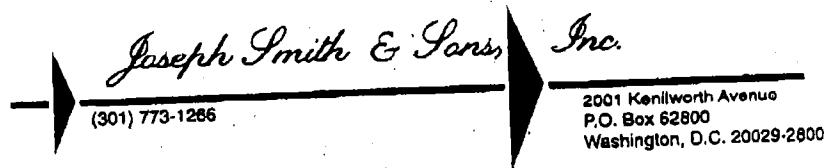
10. You are required to sign and return the original of this appointment to the contracting officer. A copy should be retained for your file. A signed copy of this letter should be provided to the COTR for information.

 10/16/01  
BRENDA SMITH Date  
Contracting Officer

 10/17/01  
Navy Technical Representative Date  
(Constitutes acceptance of the appointment and conditions thereof)

Copy to:  
OHM Remediation Svcs Corp. (R. Moreau)

**Enclosure 71. Receipt for Scrap Metal in Dumpster**



INDIAN HEAD ARSENAL  
CODE 0216  
INDIAN HEAD MD

DATE: 11/22/2002  
TIME: 2:56 PM  
RECEIPT NUMBER: 734134

Hauler:		Fee Code:	Amt:	
NUMBER	DESCRIPTION	WEIGHT	PRICE	AMOUNT
S	SHEET IRON	59980 MANUAL WEIGHT	35960	24020
TOTAL:				300.25

THANK YOU FOR YOUR BUSINESS !

JSS COPY

11/22/2002 15:28

301773/3946

11/22/2002 15:28

**Enclosure 74.**  
**IHDIVNAVSURFWARCENINST 5100.22, Chapters 1,4 and 13**

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**Chapter 13**

**CONTRACTOR SAFETY**

**13.1 Purpose.** To ensure that the customer and the contracting officer provide an acceptable contractor workplace exposure and to require contracting officers to establish working relationships between Indian Head Division, Naval Surface Warfare Center (IHDIV, NSWC) safety personnel, contract representatives, and the contractor.

**13.2 General Provisions.**

- a. Public Law 91-596, Occupational Safety and Health Act (OSHA) establishes that the contractor, as an employer, is responsible for the safety of his employees and for conforming to the standards as issued by OSHA. Additionally, he is responsible for complying with safety requirements specified in the contract and with the activity safety and security regulations.
- b. Performance by the contractor, his employees, and subcontractor personnel is subject to occupational safety and health oversight. The U. S. Department of Labor (DOL), Department of Defense (DOD), Department of the Navy (DON), and IHDIV, NSWC personnel will monitor contractor operations to ensure compliance with established safety and health standards.
- c. While in performance of any contract activity aboard IHDIV, NSWC, contractors and their employees shall be subject to the requirements of this Safety Manual regardless of the type or duration of the contract.

**13.3 Policy.**

- a. Contracting officers will incorporate into each maintenance, repair, construction, or service contract specification or agreement an accident prevention clause. It will be consistent with the Navy and IHDIV, NSWC requirements and any required by Federal Acquisition Regulations (FAR) or other Navy criteria.
- b. Contracting officers will ensure that the site approval for the project has been received prior to beginning work. Refer to Chapter 14 for requirements governing site approvals.
- c. Solicitations shall include a copy of Appendix 13-A, which lists safety requirements that contractors should consider when estimating their bids.
- d. Contracting officers shall assure that contractors acknowledge receipt of Appendix 13-A and understand its provisions.
- e. The Officer in Charge of Construction/Resident Officer in Charge of Construction (OICC/ROICC) will provide each contractor with a copy of Appendix 13-B (Investigation Report) at the pre-performance meeting.
- f. Prime contractors will be responsible for reporting any mishap or injury involving personnel, equipment, or operations under their control aboard this activity. A copy of Appendix 13-B shall be prepared and submitted to the Safety Department (Code 04) within 2 working days of each incident.

**13.4 Program.** Contracting officers will establish and maintain a safety performance plan for the duration of the contract. The safety plan is a contract submittal requirement with a copy provided to Code 04.

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**13.5 Pre-Performance Meeting.** The contracting officer will hold a pre-performance meeting to discuss mutual concerns of the contractor and the activity. This meeting will establish working relationships with the contractor, contract representatives, customer, safety, fire, and security personnel. This requirement shall apply equally to all contracts including maintenance contracts administered by Code 093. Attendees will include:

- a. *Contractor.*
- b. *OICC/ROICC administrator and representative*—the primary contact for information/assistance and representing the contracting officer.
- c. *Fire Protection Division inspector*—representing the Commander in matters about the IHDIV, NSWC fire prevention program.
- d. *Security representative*—representing the Commander in matters about IHDIV, NSWC security requirements.
- e. *Occupational Safety and Health specialist*—representing the Commander in matters about the Navy Occupational Safety and Health program requirements.
- f. *Customer*—representing the department head in matters about the contractor work area and release of facilities/real estate and in establishing work schedules.
- g. *Other*—representing an interest in the contract scope/project or workplace involved.

**13.6 Acceptance Inspections.** The contracting officer will conduct a final acceptance inspection. This inspection will include appropriate IHDIV, NSWC personnel (i.e., customer, fire, safety, etc.) to ensure satisfaction to all concerned. Section 13.5 applies.

**13.7 Deficiency Abatement.**

- a. Code 04, Code 10, or the contracting officer will notify all contractor personnel determined to be in imminent danger situations and require that they immediately correct the deficiency (i.e., work stoppage, correction, etc.). The Code 04 or Code 10 persons involved will also notify the contracting officer as soon as possible.
- b. The contracting officers will make the contractor aware that noncompliance with IHDIV, NSWC safety, security, and fire regulations will result in expulsion from the activity of the contract employee(s) involved.

**13.8 Reference.** (Use latest revision of reference.)

Public Law 91-596—Occupational Safety and Health Act (OSHA).

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**Appendix 13-A**

**INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER, INDIAN HEAD, MD  
SUMMARY CONTRACTOR AND SAFETY REQUIREMENTS FOR ALL  
MAINTENANCE, REPAIR, OR CONSTRUCTION**

1. Prior to starting any maintenance, repair, or construction, the contract job superintendent must meet with an IHDIV, NSWC Safety Department representative to become familiar with IHDIV, NSWC safety regulations.
2. Authorization (work permits) to commence scope of contract will be obtained from the IHDIV, NSWC Safety Department via the contracting officer/representative.
3. Smoking, carrying matches, lighters, or other flame- or spark-producing items on personnel or in vehicles or other carriers is prohibited in the restricted area of IHDIV, NSWC. Smoking areas will be designated by the Safety Department upon request via the contracting officer. Approval will be based on the specific operational safety concerns within the area requested.
4. The use of welding equipment, tar pots, gas burners, etc., is prohibited unless authorized by the Safety Department. Once approved, those instruments should be lighted by use of striker if possible. If matches are required within the restricted area, they will be provided by the Safety Department—for use only as authorized—to the contract superintendent. Note: Liquified petroleum gas is not allowed within the explosive areas of IHDIV, NSWC.
5. All open-flame work will be secured 30 minutes prior to leaving the work area unless a watchman is on duty for at least 30 minutes after the end of the work period. At no time will open-flame burning for debris disposal be authorized.
6. Prior to any maintenance or repair to explosive-contaminated equipment, such equipment must be inspected by the Safety Department and by the IHDIV, NSWC area supervisor. All explosive-contaminated materials must be decontaminated by IHDIV, NSWC methods and supervision prior to removal from the restricted area.
7. All traffic rules, regulations, and control devices must be adhered to. Speed limits as posted prevail. Intraplant area roadways require 15 mph unless posted otherwise, and 10 mph must be maintained on Nobel Road. All other roads require 25 mph unless otherwise posted.
8. Only necessary approved contractor vehicles will be allowed in the restricted area. These must be equipped with adequate exhaust systems and maintained in good mechanical and physical condition at all times. For all vehicles entering into the explosives areas of IHDIV, NSWC, safety inspections will be required prior to receiving a vehicle pass from the Safety Department.
9. Blocking of roadways with equipment will not be allowed at any time. Securing roadways with barricades will be accomplished only upon approval of the Safety Department and notification of the Security and Fire Protection Division. Where possible, an adequate fire lane must be provided around approved obstruction(s) for emergency equipment.
10. Securing of plant utilities (air, steam, water, etc.) will be accomplished only upon approval of the Utility Division and the affected area supervisor and then only when written permission has been obtained via the contracting representative.

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11. Rendering fire protection devices inoperable will be done only with the approval of the Fire Chief or his designated acting chief.

12. All roadways and walkways will be kept clear of debris at all times. Cleaning of same will be accomplished by the contractor at least daily or more frequently as conditions necessitate.

13. No powder-actuated tools or devices may be used.

14. Contract employees are restricted from entering buildings not included in the contract. An exception may be made for lunchrooms and change houses when authorized by the contracting officer and with the approval of the area supervisor.

15. Fuels, oils, and lubricants:

- a. Refueling of equipment and vehicles with flammable liquids will be done in areas designated by the Safety Department. All equipment used in flammables handling or operations must be of an approved type per Underwriters' Laboratory or Factory Mutual certifications. Adequate fire protection devices must be on the scene during refueling operations.
- b. All spills must be reported to the Fire Protection Division (Code 103).
- c. Used oil, oil filters, and empty oil cans will be turned into the Property Disposal Office (Code 1122) for recycling/disposal.

16. Hazardous materials:

- a. The contractor must inform the IHDIV, NSWC Safety Department and Public Works Department representatives of all contractor-owned hazardous material that will be used, stored, or handled at IHDIV, NSWC. If IHDIV, NSWC employees are exposed to these materials or potential for exposure exists, IHDIV, NSWC employees shall:
  - (1) Be informed and trained as required by Chapter 24.
  - (2) Have a material safety data sheet accessible at the workplace for each material used for their review.
- b. The contractor shall ensure that contractor employees have been informed-trained about the identification and hazards of the hazardous materials used at IHDIV, NSWC.

17. No two-way radio transmitting devices may be used while within the restricted area of IHDIV, NSWC.

18. Vehicle and construction equipment inspections include the appropriate factors listed below for safe use and conditions. Any one discrepancy is disqualifying for entry into the restricted area.

- a. Steering mechanisms must be free of defects or excessive play.
- b. Horns and warning devices must be operative.
- c. Windshield wipers must be operative.

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- d. Windshield and other window glass must be free of defects. Windshields must be provided on standard equipped vehicles.
- e. Rearview mirrors must be provided and free of defects.
- f. All standard lights must be provided, operative, and free of defects—including lens coverings.
- g. Exhaust systems must be provided, free of defects and properly supported.
- h. Fuel systems must not indicate evidence of defects.
- i. Brakes must be operative without drag, including serviceable emergency brakes.
- j. Tires must have ample tread and be free of defects.
- k. Electrical wiring must not have exposed surfaces or be loosely supported.
- l. Body conditions must be well maintained with no loose or jagged edges, excessive grease or oil on engine, and all standard features provided and operable.
- m. Where applicable, inspection will include other such items as gauges, thermometers, controls, relief valves, piping, mechanical locks, limit switches, connectors, and other safety-related devices associated with vehicles and equipment admitted to the activity.

19. Contract trailers will be equipped with polycarbonate windows when spotted within the quantity-distance area of explosive operating areas.

20. Additional requirements will be designated on the work permit based upon the contract scope and IHDIV, NSWC area involved.

21. In the event of mishap or injury involving contract personnel, operations, or equipment aboard this activity, the contractor will be responsible for preparing and submitting an investigation report (NDW/NAVORDSTA 5100-10) to the Safety Department (Code 04) within 2 working days after occurrence. The contracting officer has provided a copy of the form to the contractor at the pre-performance meeting. Additional copies are available from the contracting officer upon request.

Safety Department Representative

\_\_\_\_\_  
Date

Name of Contract

\_\_\_\_\_  
Contract Number

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**IHDIVNAVSURFWARCENINST 5100.22. Chapters 1.4 and 13**

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I have received, read, and understand the requirements of this appendix.

---

Contractor

Signature

Date

COPY TO:  
CONTRACTOR—ORIGINAL  
SAFETY DEPARTMENT (04)—1  
PUBLIC WORKS DEPARTMENT (09)—1

## IHDIVNAVSURFWARCENINST 5100.22G

1. SAFETY DEPARTMENT CODE: 4

2. TYPE OF REPORT: ☐ INCIDENT ☐ INQUIRY ☐ MATERIAL ☐ MOTOR VEHICLE ☐ MATERIALS HANDLING

3. ☐ ACCIDENT ☐ FATALITY ☐ FIRE

4. DATE/TIME OF OCCURRENCE: DATE: MONTH: YEAR: DAY: HOUR: MIN: SEC: TIME OF DAY: PM/AM

5. LOCATION: ☐ CHARGED STATION ☐ EXTERIOR ☐ INTERIOR

6. NAME OF SOURCE: LAST, FIRST, MIDDLE, LAST: HOME ADDRESS: HOME PHONE:

7. SERVICE/RANGE NO: SOCIAL SECURITY NO: MILITARY ID NO: MILITARY EXPERIENCE: ☐ MILITARY ☐ CIVILIAN

8. DUTY STATUS: ☐ ACTIVE ☐ ACTIVE/RESERVE ☐ DRILL ☐ RECALL ☐ TRAINING ☐ OTHER

9. DUTY STATUS: ☐ REGULAR ☐ TEMPORARY ☐ UNAUTHORIZED ☐ OTHER

10. OCCUPATIONAL: ☐ YES ☐ NO ☐ QUESTIONABLE (TO BE DETERMINED BY A SPECIAL REVIEW)

11. GIVE COMPLETE DESCRIPTION OF OCCURRENCE:

[illegible]

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17. DESCRIPTION OF DAMAGE TO EQUIPMENT, MATERIAL OR PROPERTY (GOV'T OR PRIVATE)		ESTIMATED OR ACTUAL DAMAGE COST
18. NUMBER OF CASUALTIES (SPECIFY MIL. CIV. CONTRACTOR OR OTHER)		
19. NUMBER UNITS INVOLVED OUT OF TOTAL BEING PROCESSED AT TIME OF INCIDENT/ACCIDENT		
20. NET WEIGHT OF EXPLOSIVES INVOLVED		
21. DESCRIBE ANY CLIMATIC OR ELECTROMAGNETIC ENVIRONMENTAL CONDITIONS INVOLVED		
22. COMMENTS (CAUSATIVE FACTORS, ADEQUACY OF OPERATING INSTRUCTIONS AND SAFETY PRECAUTIONS)		
23. STATEMENT WHETHER OR NOT INVESTIGATION WILL BE IN ACCORDANCE WITH JAG MANUAL		
24. UNSAFE CONDITION/UNSAFE ACT		
25. TYPE OF MATERIAL HANDLING EQUIPMENT INVOLVED		IDENTIFICATION NO.
26. CORRECTIVE ACTION TAKEN/RECOMMENDED		
27. SIGNATURE OF PERSON PREPARING REPORT		RANK/GRADE
28. REVIEW/COMMENTS OF DIVISION DIRECTOR		DATE
29. REVIEW/COMMENTS OF DEPARTMENT		
30. REVIEW/COMMENTS OF SAFETY DIRECTOR		
GPO 381-274		

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- (4) The bottom surface of the notch is offset at least 1/8 inch from the bottom surface of the seal or approximately four times the thickness of the strapping. See section A-A in the figure. This condition creates a separation between the leading edge of the notch and the balance of the seal. A properly functioning sealer tool should accomplish this if the person using the tool closes the handles all the way when creating the notch.
  - (5) Periodic testing of the notch tools is no longer a requirement. However, should any doubt arise as to the effectiveness of a particular notch tool, the tool may still be tested in accordance with the procedures detailed in the applicable military standard.
- w. *Fired/Spent/Contaminated Ordnance.* All fired and or spent ordnance shall be treated as contaminated material and shall be tagged with a red certification tag, NDW-NAVORDSTA 4035/29, "Explosives Decontamination Tag-Dangerous," prior to high-temperature desensitization at Caffee Road or at the solid waste recycler. After successful treatment, the item shall be tagged with a green certification tag, NDW-NAVORDSTA 4035/30, "Explosives Decontamination Tag-SAFE." All items previously containing propellants/explosives must be affixed with a green certification tag prior to final disposition at the Property Disposal Office.

**4.9 Electrostatic Control.**

- a. *General.* Accumulation of static electricity presents a hazard where exposed explosives, flammable solvents, electroexplosive devices (EEDs), or practically any finely divided combustible material is involved. The spark generated when an accumulated static charge is discharged often contains enough energy to ignite or initiate these materials. It is necessary to prevent the accumulation of static charges by grounding the equipment, material, and the operator to dissipate any charge that may form, and by using conductive or antistatic material. The following paragraphs provide operation procedures and requirements for electrostatic control. Materials and situations that are electrostatic sensitive require additional precautions. The following items are sensitive to electrostatic discharge (ESD), and therefore require additional precautions:
  - (1) Explosives or explosive mixtures that are sensitive to static discharge when they are exposed are usually primary explosives and incendiary or pyrotechnic mixtures. A list of explosives, volatile chemicals, and EEDs that contain some of the materials that are susceptible to ignition by static discharge is given below. This list is not exhaustive and any material that is initiated by discharges of less than 0.01 joule when tested (5,000 volts, 20 consecutive failures) should be considered part of this list. It should also be noted that these materials can be desensitized. One method of doing this is to wet the material with water. A partial listing of ESD susceptible explosives includes:
    - Black powder
    - Diazodinitrophenol
    - Igniter compositions
    - Lead azide
    - Lead styphnate
    - PNC
    - 80/20
    - A1A

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- (10) *Buried or Discovered Live or Unknown Munitions.* Upon discovery of such items, Safety and Security shall be immediately notified. These departments in conjunction with other cognizant IHDIV, NSWC employees will determine the best way to deal with the munition. Because of the high risk to personnel, only explosives ordnance disposal (EOD) personnel are authorized to handle or dispose of these items without an approved SOP. Normally EOD can provide disposal support only in emergency situations. Declaration of an emergency is a command-level decision.
- (11) *After Hours Explosive Operations.* Any explosive operations, including unattended operations (e.g., conditioning ovens, sample analysis, etc.) that are conducted outside normal working hours, whether on a weekday or weekend, will require notification under this guidance. The reporting process for after-hours explosive operations is as follows:
- (a) The department head or designated division director will be responsible for emailing the following information to email address "\*\*AFTER HOURS WORK" (Codes A, B, 04, 041, 042B, FD, FD1, FD2, FDFF, LE, LE1, LE1A, and LE1A1 are the members of this group) for each explosive operation prior to 1500 each workday.
    - 1. Building(s) number
    - 2. Specific hours the operation will be underway
    - 3. Type of explosive operation
    - 4. Total number of personnel on site
    - 5. POC with phone number
    - 6. Supervisor in charge of operation.
  - (b) If you are reporting a recurring operation, you need only to report once, indicating dates and times of the operation(s). Any schedule changes must be reported according to the above guidelines.
  - (c) Friday reports must include any explosive operations for the entire weekend. The Fire Department will be the central repository for all after-hours explosive operations notification. The command duty officer will check in with the Fire Department at COB every day to determine what operations will be conducted during their period of duty.
- g. *Extrahazardous Operations.* Those operations that are new and deal with material having unknown characteristics or that present the possibility of an incident during supposedly routine work are considered extrahazardous. The operating division director shall have an approved SOP prior to initiating any extrahazardous operations. Take special precautions to protect personnel and the environment when performing these jobs. The following precautions are mandatory for any operation determined to be extrahazardous unless waived by Code 04:
- (1) *Remote Control.* Remotely controlled operations.
  - (2) *Off-shift operation.* Require off-shift operation (normally between 1700 and 0700 or on weekends).
  - (3) *Scheduling.* Notify the Safety Department and the Fire Protection Division when these operations are scheduled. Specify the work area, building and bay numbers, and any unusual circumstances involved.

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(2) All department heads will:

- (a) Take all action necessary to ensure strict compliance with standard operating procedures (SOPs) and with all safety regulations as contained within this Safety Manual.
- (b) Conduct periodic reviews of SOPs (refer to NAVORDSTAINST 8023.4 [latest revision]).
- (c) Ensure timely action is taken to change procedures in SOPs when necessary.
- (d) Provide essential safety training of supervisors and operating personnel (refer to Chapter 2).
- (e) Ensure that all personnel working with explosive materials, ordnance devices, or otherwise hazardous operations are qualified and certified to perform the tasks involved.
- (f) Periodically inspect their department's buildings and equipment for safety deficiencies and promptly correct any such deficiencies.
- (g) Verify that when buildings, facilities, or equipment are constructed, modified, renovated, or updated, final approval concerning safety aspects follows approved safety criteria. Final acceptance for operational purposes is the responsibility of the facility owner and user (Chapter 16).
- (h) Develop procedures to measure and recognize superior or deficient NAVOSH performance by assigned personnel. Performance evaluations will reflect personal accountability consistent with the duties of the position and will provide appropriate recognition of superior or deficient performance.
- (i) Promptly report and investigate all incidents and injuries and provide written reports of the findings to Code 04 (Chapters 30 and 31).

b. *Supervisory Personnel.*

- (1) All supervisory personnel are responsible for the safety of their employees and the safe condition and operation of their facilities. They will familiarize themselves with the contents of this Safety Manual and comply with the stated regulations. Supervisors must not waive or alter safety regulations nor permit others to violate regulations.
- (2) All supervisors will:
  - (a) Exercise good leadership through their own compliance with all safety regulations.
  - (b) Be familiar with the special requirements of their work areas.
  - (c) Educate employees in approved safety procedures, work methods, and practices as they apply to their respective work areas.

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- (d) Conduct required "standup" safety meetings for assigned personnel. Code 04 is available to help plan these meetings.
  - (e) Analyze employee performance and capability and make job assignments accordingly.
  - (f) Cease operations when work can no longer be done safely or within operating instructions. Report action to the next level of supervision.
  - (g) Take immediate corrective action to eliminate or prevent an unsafe act or condition that could endanger personnel or property; report hazards that cannot be corrected by the supervisor to the next level of supervision.
  - (h) Encourage employees to promptly identify and report unsafe or unhealthful working conditions.
  - (i) Instruct employees in the procedures for reporting deficiencies and for appealing decisions regarding determinations of unsafe and unhealthful working conditions; clearly state that no reprisals or other punitive action can be taken against any employee for originating such a report.
  - (j) Ensure that an injured employee, regardless of how minor the injury may appear, is promptly transported to the Branch Medical Clinic for treatment.
  - (k) Promptly report and investigate all accidents, incidents, and injuries in their areas of responsibility (Chapters 30 and 31).
  - (l) Initiate appropriate recognition and reward for employees whose job performance or special acts are substantially above average in support of the NAVOSH and explosives safety programs.
  - (m) Initiate disciplinary action against employees who knowingly or carelessly violate safety requirements or regulations (refer to IHDIVNAVSURFWARCENINST 12752.1).
  - (n) Identify all persons entering the work area and determine their authority to enter and/or remain in the area; supervisors may exercise their authority to eject any person whose presence and/or actions, in the supervisor's opinion, are detrimental to safety.
- c. *Activity Personnel.* Every IHDIV, NSWC employee has a right to a safe and healthful working environment. In turn, each of us has a responsibility to ensure that we do not endanger ourselves or our coworkers through our personal actions. Specifically, all employees must:
- (1) Know and obey the rules and regulations applicable to their work areas, assigned tasks, and jobs.
  - (2) Strictly observe all safety precautions. Refer to Appendix 4-A of this manual.
  - (3) Point out known or suspected hazards to fellow workers.

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- (4) Report, either orally or in writing, any suspected unsafe or unhealthful conditions to their supervisor. Anonymous reports may be made to Code 04, if desired, instead of to the supervisor. In either case, no reprisals or punitive actions can be taken against an employee for making a report (Chapter 28).
- (5) Report immediately to the supervisor any injury or evidence of impaired health to oneself or others occurring in the course of work.
- (6) Report the presence of unauthorized personnel in the area immediately to their supervisors.
- (7) Use prescribed individual protective clothing and equipment.
- (8) Make no adjustments, alterations, changes, or repairs to any item involving explosives or hazardous materials without written instructions approved by the Safety Department.
- (9) Strictly comply with the SOP. No deviations are permitted.

**1.6 Safety Office Program Organization, Staffing, and Navy Occupational Safety and Health Functional Requirements.**

- a. *Purpose.* To establish the organization, staffing, and functions of the Safety Department, Occupational Safety and Health office per the requirements of OPNAVINST 5100.23 and NAVSEA OP 5.
- b. *Discussion.* Achieving the objectives of the NAVOSH program shall be the responsibility of the Commander. The Safety Department (Code 04) is assigned responsibility for execution of the activity's OSH program. This instruction provides guidance on OSH staffing, organization, and responsibilities.
- c. *Action.*
  - (1) *Organization.* The Safety Department head shall be placed on the immediate staff of the Commander. The IHDIVNAVSURFWARCEN Organization Manual establishes the organizational structure and functional requirements of the department. The Safety Department head also serves as the activity Explosives Safety Officer as required by OP 5.
  - (2) *Staffing.* The OSH office shall be headed by a safety professional. He/she shall not be assigned collateral duties unrelated to the function. The head of the department and supporting staff members shall be individually qualified for their assigned positions. The staff shall be adequate to develop and sustain the NAVOSH program effectiveness.
  - (3) *Functional Responsibilities.* The following minimum functions are hereby established for the OSH Division, Code 042:
    - (a) Develop accident prevention and loss control measures and programs. Coordinate with line management to measure and evaluate the costs/savings resulting therefrom.
    - (b) As required, prepare specific activity OSH rules and regulations for approval and promulgation by the activity commander.
    - (c) Organize and/or conduct OSH inspections and surveys to identify violations, hazards, and deficiencies in operations, facilities, and equipment.

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- (d) Record safety and health violations and deficiencies, coordinate actions for correction, conduct followup inspections, and maintain status reports on actions taken.
- (e) Coordinate actions and follow up to ensure that projects are developed and executed to obtain centrally managed NAVOSH funding to abate deficiencies.
- (f) Maintain complete and accurate records on the accident, injury, and occupational illness experience of activity personnel, and fulfill the reporting requirements specified in OPNAVINSTs 5102.1 and 5100.23. Submit necessary reports to the Naval Safety Center (NAVSAFECEN).
- (g) Conduct accident investigations and studies; analyze reports of occupational injuries or illnesses and property damage to identify causal factors and determine trends; and initiate program improvement action accordingly.
- (h) Maintain liaison with planning and design officials on the adequacy of tools, equipment, facilities, designs, plans, and specifications from the safety and health standpoint; and ensure that OSH precautions are integrated into all planning and design efforts.
- (i) Consult as necessary with occupational health professionals on the identification, evaluation, and control of exposures to toxic materials or harmful physical agents.
- (j) Assist supervisors and training specialists in developing and conducting OSH training, education, and indoctrination of new employees. Ensure that continuing activity training programs require specific OSH refresher training and, where conditions warrant, specialized OSH training.
- (k) Provide consultation service, advice, and guidance to all activity organizational elements and levels of supervision covering the technical aspects of safety, the principles of hazard recognition and control, and the application of these principles as they relate to the employee and the workplace.
- (l) Foster personal safety awareness at all levels of the organization through appropriate promotional methods and channels of communication.
- (m) Coordinate the preparation of the activity's annual OSH budget submission.
- (n) Establish written departmental goals and objectives for the activity's NAVOSH program and evaluate program performance.
- (o) Serve as technical consultant to the Human Resources Department (Code 06) in coordinating the activity's NAVOSH program with representatives of the unions as required by negotiated labor agreements.
- (p) Implement the hazard reporting system that provides employees with a method of reporting unsafe or unhealthful conditions.

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- (q) Serve as technical authority in the procurement of approved personal protective equipment and as coordinator for all facets of the personal protection, noise control, and sight conservation programs.
- (r) Assist in the development of a motor vehicle accident prevention program. Analyze all investigation reports of motor vehicle accidents (regardless of who makes the investigation) and make recommendations for corrective actions to the activity commander. Submit the necessary reports to NAVSAFECEN.
- (s) Work closely with the activity Injury Compensation Program Administrator (ICPA) and provide data as appropriate to the ICPA for the proper evaluation of claims submitted to the activity Workers' Compensation Office.
- (t) Cooperate with and provide advice to medical and employment personnel on the proper selection and placement of personnel from a safety standpoint.
- (u) Provide safety services to tenant commands as specified by individual host/tenant agreements.
- (v) Ensure that the activity develops and implements procedures to measure and recognize superior or deficient OSH performance and that supervisors are trained in their application.
- (w) Maintain liaison with the Branch Medical Clinic (Code MED). Provide consultation services and medical surveillance program data on a continuing basis.
- (x) Implement a back injury prevention program. Analyze back injury data to identify the number, frequency, type, location, and costs of those injuries.

**1.7 Definition of Terms.** Terms are defined and interpreted in this Safety Manual as they specifically apply to IHDIV, NSWC. They do not always conform, therefore, to the ordinary dictionary meaning. See the Glossary for definitions of terms.

**1.8 Mandatory and Advisory Regulations.** Requirements contained in this Safety Manual in which the terms "shall," "will," or "must" appear are mandatory except when deviations are approved by 04, 041, or 042. Requirements in which the terms "may" or "should" appear are advisory in that compliance is normally expected as a good practice.

**1.9 References.** (Use latest revision of all references.)

OPNAVINST 5100.23—Navy Occupational Safety and Health (NAVOSH) Program Manual.

NAVSEA OP 5—Ammunition and Explosives Ashore.

OPNAVINST 5102.1—Mishap Investigation and Reporting.

IHDIVNAVSURFWARCEN 5090 series of instructions.

IHDIVNAVSURFWARCENINST 12752.1—Adverse Actions.

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IHDIVNAVSURFWARCEN Organization Manual.

NAVORDSTAINST 8023.4—Submission, Review and Maintenance of Standard Operating Procedures.

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**Chapter 4**

**EXPLOSIVES SAFETY**

**4.1 Purpose.** To provide safety precautions and guidelines for the planning, development, and performance of tasks involving explosives and other hazardous items. The precautions are not all-inclusive, and requirements specified in other chapters and in applicable Naval ordnance documents must also be considered. This chapter also provides guidelines for management review, process review boards, and safety review committees of potentially hazardous projects.

**4.2 Scope.** The requirements of this chapter are the minimum required to prevent personnel injuries, property damage, or damage to the environment from explosives or other hazardous programs. Additional safety standards required because of particular hazards and exposure in the operating areas will be put forth in standard operating procedures (SOPs).

**4.3 Basis.** NAVSEA OP 5, Volume 1, *Ammunition and Explosives Ashore*, is the basis of the explosives safety program.

**4.4 Program Planning.** New programs and operations will address identification of and compliance with safety and environmental requirements throughout all planning stages. The responsible manager must allot adequate time to ensure proper engineering, planning, safety analysis and characterization/testing, work area preparation, and personnel training/qualification/certification are completed before the start of the operation. Experience has proven that early involvement of the Safety Department improves overall performance in the areas of safety, cost, and schedule.

- a. *Liaison with Safety Department.* Project personnel will establish and maintain liaison with the Safety Department during the planning of new programs and operations. The Safety Department should be consulted on intended project locations, building modifications, and equipment designs, and take part in conferences concerning these aspects of the project. Early in the project it should be determined if a site approval submission will be required.
- b. *Hazardous Material Characteristics.* For new programs and operations, provide the Safety Department with available safety characteristics information on all hazardous materials used or produced, including by-products and waste streams. This information includes fire and explosive hazards, special handling requirements, processing and storage requirements, physiological and toxic effects, material compatibilities, and safe and environmentally acceptable hazardous waste accumulation and disposal procedures. For new materials, this information may not be available. The generation of these safety characteristics must then be accomplished during the laboratory and scaleup process. See section 4.6.
- c. *Energetic Materials.* For new programs and operations, provide the Safety Department with the classification and qualification test results for the energetic materials used or produced. NAVSEAINST 8020.5B and NAVSEAINST 8020.8A describe the tests required for qualification and shipping classification respectively. For new energetics, these tests may not have been performed yet; therefore, the tests must be performed during the laboratory and scaleup process. See section 4.6.

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- d. *Facilities Planning.* Planning for any IHDIV, NSWC facilities program must address explosive safety quantity-distance (ESQD) requirements, site approval (see Chapter 14), personnel protection needs, remote control features, storage capabilities, special safety devices required (such as interlocks), types of equipment, environmental and occupational safety and health (OSH) controls, egress, and fire protection (see Chapter 17).
- e. *Project Documentation Review.* The Safety Department must approve all drawings, specifications, contracts, scopes of work, sketches, and major work requests for new processes, facilities and equipment, tools, fixtures, etc. or modifications to same *prior to purchase* or performance of work. Review criteria are described in Chapter 14.
- f. *Process Review Boards/Safety Review Committees (PRB/SRC).* Startup of many new facilities or pieces of equipment requires additional review in the form of a PRB/SRC (see section 4.7).
- g. *Range Certification.* Outdoor weapons ranges, such as the skeet and small arms ranges, must have NAVFACENGCOM certification. These ranges shall not be used without the required certification unless a CNO waiver to the requirements of MIL-HDBK 1027/3B is obtained.

**4.5 Training.** A training program will be conducted and operators qualified/certified as required by Chapter 2.

**4.6 Characterization of Materials.** When the characteristic, qualification, and classification information discussed in paragraphs 4.4.b and 4.4.c is not available for a material, it is necessary to generate these data. This is achieved through a process starting with the manufacture of small quantities (laboratory characterization) and gradually scaling up to large quantities. At each quantity, tests are performed and results evaluated prior to proceeding to the next larger size. Throughout this process, the quantity manufactured shall be kept at the minimum necessary for the tests planned. Prior to manufacturing, both emergency and standard disposal procedures must be developed and approved. Any material that proves to be unstable must be isolated and disposed of as soon as possible. The process for generating the necessary data includes, but is not limited to, the following:

- a. *Laboratory Characterization.* This is typically where compatibility, thermal stability, and sensitivity data (impact, friction, and electrostatic discharge) are obtained. The quantity manufactured is normally 10 grams or less. Prior to manufacture, the scientist/ engineer will evaluate the potential hazard of manufacturing the proposed material using whatever literature, data, and background information is available. For energetic materials, the explosives hazard potential and sensitivity of energetic material to inadvertent initiation must be thoroughly investigated. The scientist/engineer will prepare and have approved a laboratory review form in accordance with section 5.11 prior to manufacture. If the proposed material contains a new ingredient, the new ingredient must be tested for compatibility with the other ingredients prior to manufacture of the material. The smallest quantity practical (10 grams or less using hand or remote processing equipment) will be made to generate the material for thermal stability and sensitivity testing. Thermal stability testing will be performed as soon as possible after manufacture.
- b. *Scaleup Procedures.* Once laboratory characterization is complete, the laboratory review committee (see paragraph 5.11.f) will evaluate the data to determine if scaleup is warranted. The scaleup process is an orderly development program with the goal being to obtain a useful product that can be safely manufactured and stored. The details of the process (quantities, documents, approvals) may vary among organizations. Each organization's plan specifying these details must be approved by Code 04. Elements that shall be consistent among the plans include:

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- (1) A documented peer review and approval prior to proceeding to the next larger quantity throughout scaleup. This review would include ensuring safety and processing data are adequate to support the next size batch. Typical sizes used in explosives scaleup are outlined below:
  - (a) 10–500 grams. These quantities are the first manufactured after laboratory characterization. The initial batch should provide the amount of material necessary to generate additional stability and sensitivity data. The stability and sensitivity of the material shall be investigated in various stages of processing.
  - (b) 500–4,000 grams. Material from these quantities are used for additional safety and performance tests. Results of these tests are compared to similar data for a material as nearly like the new material as possible that has been successfully processed. If data to this point are acceptable, similar size batches (500 to 4,000 grams) are usually made to provide material for hazard characterization/qualification tests and process variables evaluation.
  - (c) 4,000 grams and larger. These quantities provide for process hazard classification, shipping hazard classification, qualification, and toxicology as well as application testing.
- (2) Provisions for —
  - (a) Changing the formulation as a result of information gained during scaleup
  - (b) Compositional modifications to previously evaluated formulations
  - (c) Using available test data, such as thermal stability and sensitivity, from another laboratory.

In all of these cases, it may not be necessary to start at laboratory characterization. Again, the peer review shall be used to approve where in the process to begin.

- c. *Material Safety Data Sheet (MSDS)*. Departments must prepare an MSDS for all hazardous material produced at IHDIV, NSWC. MSDSs are further described in Chapter 24. IHDIV, NSWC MSDS forms and assistance in their preparation are available from Code 042.

**4.7 New Process Validation.**

- a. *Scope*. All new explosive processes, equipment, and facilities; processes that have been significantly changed; or processes that have not operated within the previous 2 years must be validated as being acceptable for the planned operation. A process review board (PRB) or a safety review committee (SRC) is the mechanism by which new or changed processes become validated. The PRB validation must show that the process can operate following the operating procedures (i.e., SOP) to produce the desired results and that the facility, equipment, and operating procedures meet technical, security, quality, explosives safety, OSH, and environmental requirements. The SRC validation must show that the process can operate following the operating procedures to comply with explosives safety, OSH, and environmental requirements. With prior approval of the Safety Director (Code 04), a production readiness review (PRR) in accordance with IHDIVNAVSURFWARCENINST 4855.4 may be substituted for either a PRB or a SRC. The PRR panel must include at least one representative from the Safety Department. If the PRR is being substituted for a PRB, then the Commander must release the project to production or to conduct live runs. If the PRR is being substituted for a SRC, then the Safety Director must release the project.
- b. *Process Review Board (PRB)*. The board reviews a new or changed process and makes recommendations to the Commander as to whether the process should be started.

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- (1) PRB Composition.
  - (a) Safety Director (Code 04)—Chairman
  - (b) Ordnance Department Head (Code 20)—Alternate Chairman
  - (c) Director of Quality Operations (Code TDQ)
  - (d) Department head having cognizance over facility or project being reviewed
  - (e) Director of Industrial Operations (Code TDO)
  - (f) Director, Environmental Division (Code 095)
  - (g) Other personnel possessing unique/specialized knowledge relevant to the project being reviewed.
- (2) *Process Review Board Requests.* The cognizant department head is responsible for requesting review by a PRB and is also responsible for obtaining a decision from Code 04 if there is any doubt regarding the need for this level of review. Code 04 may also request that a PRB be held. At each of the junctures in the life of a program, a PRB should be conducted if the next step in the program presents a significant new hazard or a hazard beyond standard practice for this division because of the type of material, equipment, or process being used or because of the interdepartmental nature of the process. Examples of junctures that should receive extra scrutiny to determine if a significantly new or extra hazardous operation exists are:
  - (a) When work continues on a new process on mixes scaled up above 4,000 grams.
  - (b) When a new ingredient is added to a propellant formulation or an appreciable change is made to an existing formulation. Particular attention should be given when a nitrate ester, HMX, or RDX is involved, when solids loading exceeds 80%, or when fast-burning material is to be processed.
  - (c) When new facilities or equipment are used or existing facilities or equipment are modified.
  - (d) When a process is being restarted following an explosive or near-explosive incident.
  - (e) When a process is being restarted after having not been in operation for a period of 2 years or more and is significantly different from other ongoing processes to warrant strenuous review.
  - (f) Anytime when there is any indication that a process presents a potential hazard not encountered in prior experience. Cognizant managers are responsible for recognizing these situations and recommending review.
- (3) *Process Review Information.* The following information, as applicable, is to be reviewed by the PRB and by a SRC:
  - (a) Process description
  - (b) Material flow, storage, and disposal —
    - Process flow diagrams
    - Material balance
    - Expected composition of waste streams
    - Raw material storage



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- Intermediates storage
  - Finished product storage
  - Storage compatibility data
  - Waste handling, storage, and disposal methods.
- (c) Hazardous materials —
- Explosives safety consideration —
    - Chemical and physical properties with respect to fire and explosive hazards
    - Safety criteria tests, including hazard classification
  - OSH considerations —
    - Chemical and physical properties with respect to toxicity and other health hazards
    - Hazardous material minimization
    - Material safety data sheets
    - Personal protective equipment required
  - Environmental considerations —
    - Premanufacturing notice (if manufacturing a chemical not on the Environmental Protection Agency [EPA] TSCA Chemical Inventory)
    - Preliminary environmental assessment (if process does not already have one)
    - Required permits
    - Hazardous waste minimization plan
    - Waste disposal methods for all wastes
    - Spill management plans (containment, reporting, treatment)
    - Potable water use minimization plans
- (d) Hazard analysis (see MIL-STD 882 and OP 5, section 7-6.3)
- (e) Scaleup justification (if applicable) —
- Appropriateness of process vessels and equipment
  - Estimates of heat required or generated by chemical reactions and process controls for same
  - Information gained in smaller scale work that will be used in scaleup
- (f) Facilities —
- As-built drawings
  - Appropriateness of facilities

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- Personnel and explosive limits by room or bay
- Explosives safety quantity-distance arc site approval
- (g) Equipment —
  - As-built drawings
  - Appropriateness of equipment
  - Preventive maintenance schedule
  - Pre-operation checkout procedures
- (h) Standard operating procedures (SOPs) or preliminary SOPs
- (i) Personnel Training and Qualification/Certification Plan
- (j) Hazard control briefing(s)
- (k) Quality assurance plans (QATIPs, QPPs, shop travelers)
- (4) *Duties and Responsibilities.*
  - (a) Chairman of the PRB —
    - Establish the PRB by memorandum to board members.
    - Coordinate scheduling of PRB meetings and Command presentation (or briefing).
    - Present recommendations of the PRB to the Commander.
    - Request Commander's permission for live runs or release to production.
  - (b) Cognizant operating department —
    - Request PRB.
    - Prepare and distribute one preliminary documentation package to the Safety Department (Code 041) and one copy to the Environmental Division (Code 095) for preliminary review. This preliminary review is not a detailed review but a review to determine that all of the basic information is included and that no obvious show-stopping problems exist. Turn-around response is 5 workdays.
    - If requested, give tour of facility and provide assistance to Safety Department and Environmental Division members reviewing the preliminary documentation package.
    - Incorporate changes to documentation package deemed necessary after preliminary review.
    - Distribute final documentation package to each PRB member plus one additional copy to Code 041. Distribution shall be made no later than 10 workdays before the desired review date.
    - Incorporate changes to documentation package deemed necessary after PRB meetings and address any action items generated from same.

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- Coordinate SOP validations (inert step-by-step SOP walk-through) with the Safety Department.
- (c) Safety Department —
  - Assign appropriate personnel from the Explosives Engineering Safety Division and/or Occupational Safety and Health Division to become thoroughly familiar with the process being reviewed.
  - Review preliminary documentation package and recommend changes (5-workday response).
  - Inspect facilities and equipment and recommend changes.
  - Provide secretariat and issue minutes of PRB meetings.
  - Validate process SOPs during pre-operational and operational line checks. Identify items noted during the demonstration that require further review.
- (d) PRB members —
  - Review documentation package before PRB meetings.
  - Provide written comments to the chairman on any issues to be resolved not later than one day after the meeting.
  - Participate in board meetings.
  - Tour facilities under review.
  - Advise chairman on adequacy of action item resolution and readiness for Command briefing.
- (5) *Action items*
  - (a) The PRB will assign Class I and II status to all action items. Class I items must be corrected prior to starting live operations and, in all but unusual circumstances, shall be completed prior to requesting command approval to begin live operations. Class II action items may be completed after starting live operations or as directed by the PRB.
  - (b) Any action items closed prior to the Commander's approval to start up operations will not appear on the deficiency abatement log (DAL).
  - (c) Any Class II action items that are open when startup is approved will be entered into the DAL. The PRB secretary is responsible for providing all information to Code 042BS on a 5100/12 form so the open items can be entered into the DAL with a "PRB" suffix.
  - (d) The PRB secretary is responsible for placing a copy of the 5100/12 forms and the issuing cover memo in the PRB file. All further tracking of the action items will be via the DAL.

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- (e) On a quarterly basis, Code 042BS will print a list of all open PRB action items contained in the DAL and route to Code 041A personnel.
  - (f) Each PRB secretary will review open action items associated with their PRB and notify Code 04 management if expected progress is not being made. Notification will normally be via the weekly notes; however, other methods should be used for items needing urgent management attention.
- c. *Safety Review Committee (SRC).* The SRC reviews a new or changed process where the scope of the process or change does not require a process review board, and makes recommendations to the cognizant division director, Code 041, and Code 04 as to whether the process should be started. Code 04 grants final approval. This committee will meet informally as requested by the cognizant division director. Minutes of the meeting with the rationale for decisions will be kept by the project and Code 041 representatives. The minutes will include a form which provides for the following:
- Description of proposed process or change
  - Rationale for review at the SRC level
  - Documentation of hazard analysis for the proposed process or change covered by the SRC. This section documents the informal hazard analysis performed to determine the level of impact of the new process or change to the existing process. This section would record the expected level of risk associated with the project, protective features used to mitigate risk (such as shields, protective clothing, etc.), engineering controls to reduce the risk (key interlocks, fire protection, conductive floors, etc.), and the interface of the equipment or process with the material in use.
  - Conclusions of the SRC.
- (1) *SRC Composition.* An SRC is set up by Code 041 upon request by a cognizant division director. It normally consists of a project engineer and a Code 041 representative. Other management and technical support personnel may also be on the committee if requested by the cognizant division director or Code 041.
- (2) *SRC Requests.* The cognizant division director is responsible for requesting review by an SRC and is also responsible for obtaining a decision from Code 041 if there is any doubt regarding the need for a review. An SRC should be considered at any time a process is undergoing change. A processing change may fall into the scope of an SRC under the following conditions:
- (a) Process has operated within the previous 2 years or is not significantly different from other ongoing processes.
  - (b) Modification is made to existing operational equipment.
  - (c) Change does not alter the function of the equipment or facility.
  - (d) Explosive or propellant formulations are similar to those which have been processed at IHDIV, NSWC.
  - (e) New material is not of higher sensitivity or explosive energy hazard (hazard classification).

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- (f) There is no indication that the change would present a hazard not apparent from prior experience.
  - (g) The change is within the design/processing practices currently used at IHDIV, NSWC.
  - (h) The change produces no significant changes in negative environmental impacts (e.g., wastewater or hazardous waste generation is not increased; amount of solvents exhausted to the atmosphere is not increased; amount of fresh water required by the process is not increased; etc.).
- (3) Action Items
- (a) SRC action items that are open when operational startup is authorized will be entered in the DAL. The Code 04 SRC representative is responsible for providing all information to Code 042BS on a 5100/12 form so the open items can be entered into the DAL with a "SRC" suffix.
  - (b) The Code 04 SRC representative is responsible for placing a copy of the 5100/12 forms and the issuing cover memo with the SRC minutes in the appropriate building file. All further tracking of the action items will be via the DAL.
  - (c) On a quarterly basis, Code 042BS will print a list of all open SRC action items contained in the DAL and route to the associated Code 04 personnel.
  - (d) Code 04 personnel will review open action items associated with their SRC and notify Code 04 management if expected progress is not being made. Notification will normally be via the weekly notes; however, other methods should be used for items needing urgent management attention.

The following processing changes usually do not require review by a PRB or a SRC but must have a Safety Department work permit (see Appendix 4-A [31]):

- (a) Relocation of minor equipment
- (b) Replacement with like equipment
- (c) Minor changes in nonhazardous areas
- (d) Minor repairs.

The person issuing the work permit has the option of permitting the work while requiring additional review prior to using the equipment.

- d. *Pre-operational and Operational Line Checks.* Following an SRC or PRB, Code 04 personnel and cognizant division personnel will conduct joint pre-operational and, if deemed necessary, operational line checks. The scope of the line checks shall be at least of the affected process but may also include other related operations or processes. Any significant hazardous conditions found during a line check will be cause to cease the operation. Any significant modifications found necessary during a line check will require review and approval by the original review level, SRC, or PRB.
- (1) The pre-operational line check shall cover the following areas: facilities, tooling and equipment, personnel protection, training, procedures, and environmental compliance. The SOP shall be validated by witnessing an inert or dry run of the process where possible.

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- (2) If an operational line check is conducted, it should cover, in addition to those areas listed above, operator qualification/certification and materials handling. The SOP should be validated by witnessing a live run. The operational line check should be conducted as soon as practical following the start of operations. Unless unusual conditions exist, the operational line check should be conducted within the first 5 days of operation.

**4.8 Safety Requirements.**

- a. *Hazards Analysis/Risk Assessment.* A requirement hazard analysis (RHA) of risks shall be performed on all new or modified industrial operations and facilities. Based on this analysis, engineering design criteria shall be developed for selecting equipment, shielding, engineering controls, and appropriate protective clothing for personnel for the operation being performed. Prepare the hazard analysis in accordance with Task 203 of MIL-STD-882. The analysis, at a minimum, shall address quantity, initiation sensitivity, heat output, rate of burning of material involved, potential ignition sources, protection capabilities of shields, various types of clothing and fire protection systems, and expected personnel exposure. Refer to NAVSEA OP 5, Chapter 7, for additional information related to hazard analyses, personnel protection requirements, and protection techniques that may be used to reduce the risk of an operation.
- b. *Facilities.* The cognizant department head and subordinates are responsible for the buildings and facilities in which operations are conducted (NAVORDSTAINST 11016.1). Department heads will ensure that acceptance inspections (explosives safety, OSH, environmental) are conducted jointly with Codes 04 and 095 for buildings and facilities after construction and equipment installation/modifications (Chapter 16).
- c. *Inert Operations.* Division directors will ensure that an inert or dry run is conducted prior to starting processing in buildings, facilities, or equipment that have been newly constructed, modified, installed, or repaired. A dry run must be conducted on new processes or modified methods to determine that the operation can be safely done. A Code 04 representative will witness the dry run.
- d. *Transition to Explosive Operations.* The transition from inert materials to sensitive materials in a new facility will be gradual. It may be necessary to scale up to the desired quantities of the more sensitive materials. The Safety Department must be made aware of any plans to transition an operation from inert to hazardous.
- e. *Shielding.* The primary need for operational shielding is dependent principally upon such factors as the quantity and type of explosive or other hazardous materials being handled and the nature of the operation being performed. In general, any operation where energy is being put into the process must be shielded, unless a hazard analysis as described in paragraph 4.8.a above determined that shielding is not necessary because the risk to personnel is at an acceptable level. The Safety Department must review and concur with the findings of a hazard analysis before corrective actions or findings may be implemented. Refer to Chapter 14 for details relative to personnel protective shield design, testing, and marking. Operations requiring a shield must have the shield identified by drawing number in the SOP governing that operation.
- f. *Explosives Operations.* For explosives operations, the following criteria will be observed:
  - (1) *Components and Facilities.* All components, facilities, equipment, and personnel must be capable of performing their required functions without failure.

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- (2) *Operation and Performance.* Perform operations only with qualified/certified personnel and only following an approved current SOP.
- (3) *Personnel Protection.* Personnel working in the vicinity of flammables, explosives, or other hazardous materials will be provided with adequate personal protective equipment and facilities, such as safety showers and eyewash fountains, for the types of exposure involved. Refer to Chapters 11 and 14 for additional information regarding personnel protective equipment. Before the startup of any explosives operation, determine and install the amount and kind of protection necessary to prevent loss of life and minimize the risk of personnel injury in the event of an incident.
- (4) *Work Areas.* Arrange work areas to allow unobstructed access to emergency exits in case of fire or other incidents. Makeshift arrangements, improper tools or equipment, and unauthorized articles are not permitted in work areas.
- (5) *Industrial Hygiene.* Thoroughly inform personnel exposed to explosives or other hazardous materials that may be reactive, toxic, corrosive, or otherwise injurious to their health of the hazards involved, methods of detecting ill effects and the emergency first aid procedures (see the material safety data sheet). OPNAVINST 5100.23 requires that the Branch Medical Clinic (Code MED) be cognizant of these exposures, and DOD Manual 6055.5 requires that exposed employees receive periodic physical examination (Chapter 19).
- (6) *Borrowed Facilities.* Personnel performing operations in facilities borrowed from another department or division must be qualified/certified in the safe use of these facilities according to appropriate SOPs and must know the safety and environmental regulations for the borrowed facility and adjacent areas. Any modifications to borrowed facilities must be approved by the cognizant department head and Code 04. Facilities and equipment must be restored to the original condition unless otherwise agreed to by the cognizant department head.
- (7) *Compatibility and Sensitivity.* Compatibility and sensitivity data as outlined in paragraph 4.7.b(3)(c) will be provided to Code 04 on all materials used in any program and on intermediate compounds occurring during any phase of processing. Where specific knowledge of an explosive's characteristics is lacking, the worst characteristic must be assumed and used to establish adequate safety precautions. This may require that the material be classified as extrahazardous until actual test data are obtained.
- (8) *Remote Operations.* When acceptable risks to personnel are expected to be exceeded, as when the likelihood of an incident is greater because energy is being put into the process, then protection from fragments, overpressure, and thermal flux shall be afforded to all personnel within K24 distance of the operation being performed. Provisions shall be made, such as flashing red lights, barricades, etc. to prevent personnel from entering within the K24 distance. Determination of acceptable risk is a product of the hazard analysis described in paragraph 4.7.a. Refer to Chapter 14 for protective construction requirements.
- (9) *Crew Shelters.* Protection for personnel located within K24 of a facility is often accomplished by constructing a hardened crew shelter. Leaving the door to such facilities open or unlatched allows the pressure waves to enter the facility and negate the protection the facility was designed to provide. Therefore, all doors to crew shelters when a K24 operation is being conducted shall be shut and latched.

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- (10) *Buried or Discovered Live or Unknown Munitions.* Upon discovery of such items, Safety and Security shall be immediately notified. These departments in conjunction with other cognizant IHDIV, NSWC employees will determine the best way to deal with the munition. Because of the high risk to personnel, only explosives ordnance disposal (EOD) personnel are authorized to handle or dispose of these items without an approved SOP. Normally EOD can provide disposal support only in emergency situations. Declaration of an emergency is a command-level decision.
- (11) *After Hours Explosive Operations.* Any explosive operations, including unattended operations (e.g., conditioning ovens, sample analysis, etc.) that are conducted outside normal working hours, whether on a weekday or weekend, will require notification under this guidance. The reporting process for after-hours explosive operations is as follows:
  - (a) The department head or designated division director will be responsible for emailing the following information to email address "\*\*AFTER HOURS WORK" (Codes A, B, 04, 041, 042B, FD, FD1, FD2, FDFD, LE, LE1, LE1A, and LE1A1 are the members of this group) for each explosive operation prior to 1500 each workday.
    - 1. Building(s) number
    - 2. Specific hours the operation will be underway
    - 3. Type of explosive operation
    - 4. Total number of personnel on site
    - 5. POC with phone number
    - 6. Supervisor in charge of operation.
  - (b) If you are reporting a recurring operation, you need only to report once, indicating dates and times of the operation(s). Any schedule changes must be reported according to the above guidelines.
  - (c) Friday reports must include any explosive operations for the entire weekend. The Fire Department will be the central repository for all after-hours explosive operations notification. The command duty officer will check in with the Fire Department at COB every day to determine what operations will be conducted during their period of duty.
- g. *Extrahazardous Operations.* Those operations that are new and deal with material having unknown characteristics or that present the possibility of an incident during supposedly routine work are considered extrahazardous. The operating division director shall have an approved SOP prior to initiating any extrahazardous operations. Take special precautions to protect personnel and the environment when performing these jobs. The following precautions are mandatory for any operation determined to be extrahazardous unless waived by Code 04:
  - (1) *Remote Control.* Remotely controlled operations.
  - (2) *Off-shift operation.* Require off-shift operation (normally between 1700 and 0700 or on weekends).
  - (3) *Scheduling.* Notify the Safety Department and the Fire Protection Division when these operations are scheduled. Specify the work area, building and bay numbers, and any unusual circumstances involved.



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- (4) *Notification.* Notify all area management and supervisory personnel that sensitive operations will be performed and inform them of any special area restrictions affecting their operational schedules. Notify the Police Chief and Fire Protection Division when roads are to be closed.
- h. *Emergency Conditions.* When an emergency condition exists (for example, when continuing an operation could affect safety of personnel, when there is a violation of an environmental compliance permit, when an SOP cannot be followed without endangering personnel or equipment, or when a malfunction of process equipment occurs), operations must be stopped in a safe and environmentally sound manner and higher line authority immediately notified. Operations to remedy an emergency situation may be authorized by Code 04 and the cognizant department head. Examples of other emergency condition operations are as follows:
- (1) Hazardous weather conditions such as wind, rain, high water, and lightning may result in an emergency condition. The first line supervisor shall be responsible for terminating operations when he/she feels conditions are unsafe. The availability/non-availability of a Lightning Warning System (LWS) does not relieve the on-site supervisor of this responsibility. To assist the first line supervisor, an LWS has been established. The following organizations have continuing actions:
- (a) *Code 6720.* Monitor and maintain LWS capabilities. Ensure that points of contact within each department are notified when thunderstorm warning conditions change.
- (b) *Codes 09, 20, 30, 40, 50, and 90.* Review your department's/division's plan for responding to the thunderstorm warning conditions at least annually. Update the plan as necessary to remain current with changing organizational and operational conditions. Ensure the plans address the following:
1. *Thunderstorm Condition III.*
    - The LWS automatically sets the condition.
    - Departments prepare/plan to cease explosives operations if the condition is raised.
    - Ordnance-handling operations that will take more than 3 hours are postponed and rescheduled.
    - Careful consideration should be given to starting any explosives-loading cycle while this condition exists.
  2. *Thunderstorm Condition II.*
    - The LWS automatically sets the condition.
    - Handling or processing explosives should proceed to a completion point.
    - Secure open magazines.
    - Do not start any explosives-mixing cycle.

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3. *Thunderstorm Condition I.*

- The LWS automatically sets the condition.
- Cease all explosives operations except those identified in each department's plans. Secure all main power switches in facilities without lightning surge protection and evacuate personnel to the designated safe locations.
- Operations shall *not* be shut down for processes where the shutdown creates a greater risk to the facility and personnel than the thunderstorm. These facilities are identified in each department's Safety-approved evacuation plan.
- It is not necessary to terminate operations or to evacuate personnel from explosives-operating buildings or other hazardous locations that have primary lightning protection and secondary grounding systems meeting current requirements unless explosive dust, flammable vapors, or exposed electroexplosive devices (EEDs) are present, or unless there are explosives-operating buildings not equipped with lightning protection located at less than intraline distance from the building. These buildings and operations shall be specifically identified in the hazardous weather bill.
- Motor vehicles containing ammunition shall, if possible, be placed in an area equipped with primary lightning protection. Loading or unloading is prohibited.
- The destruction of ammunition, explosives, and other hazardous materials, as well as explosives tests and operations incidental thereto, shall cease.
- Cease all fueling operations.
- Cease all high work (such as electrical power live work, tree cutting/trimming, water tower painting, etc.).

4. *Conditional Clear.* At the department's discretion operations may resume.

5. *All Clear.* Operations may resume upon receipt of the "all clear" message.

- (2) In case of fire or explosion, secure operations in a safe and environmentally sound sequence of operations according to the SOP unless such actions would increase the hazard to personnel. The local fire bill and the area spill bill will give additional guidance.

i. *Personnel and Explosive Limits, Fire Symbols, and Red Flags.*

- (1) *Personnel and Explosive Limits.* Limits must be established and approved for all buildings and areas where explosives are handled, stored, and processed and other buildings within intraline (K18) arcs from such facilities. New or modified limits become effective when the governing SOP and the limits signs are updated.
- (2) *Minimize Personnel.* Limit the total number of personnel exposed to an explosives or other hazardous operation to the minimum required for performing the work on hand. A minimum of two persons (within voice distance of each other) is required on all explosives or other hazardous operations.

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- (3) *Minimize Material.* Limit the amount of explosives and other hazardous materials to the least amount needed for an operation and never exceed the approved limits for a building or area. NAVSEA OP 5, Vol. I establishes maximum building explosives limits based on quantity-distance and facility construction limitations.
- (4) *Governing Limits.* The approved building explosives limits will not be exceeded. The SOP will govern when limits lower than the approved building explosives and personnel limits are required for specific operations.
- (5) *Area Limits.* Established building explosives limits also include the total explosives contained in the immediately adjacent areas, vehicles, or rail cars.
- (6) *Multi-use Buildings.* In instances where multipurpose buildings have been approved for either Class/Division 1.1, 1.2, 1.3, or 1.4 operations, separate limits for each classification will be established. The SOP will control which operations may be conducted concurrently.
- (7) *Combined Explosive Limits.*
  - (a) *Combined Class/Division 1.1 and 1.3.* When both Class/Division 1.1 and 1.3 materials are within the same storage area or building, the total weight of material will be considered as 1.1 and will be governed by 1.1 limits. Exceptions to this rule will be controlled by the SOP.
  - (b) *Combined Class/Division 1.1, 1.2, and 1.3.* When Class/Division 1.1, 1.2, and 1.3 materials are within the same storage area or building, the total weight of material will be considered as 1.1 and will be governed by 1.1 limits. Some exceptions exist for Class/Division 1.2 items. Exceptions will be controlled by the SOP.
  - (c) *Class/Division 1.2 and 1.3.* When Class/Division 1.2 and 1.3 materials are within the same storage area or building, each type of material is considered separately. The total weight of Class/Division 1.2 material must be less than the 1.2 weight limit and the total weight of Class/Division 1.3 material must be less than the 1.3 weight limit.
  - (d) *Class/Division 1.4 items combined with Class/Division 1.1, 1.2, and 1.3.* The limits for Class/Division 1.1, 1.2, 1.3, individually or in combination, are not affected by the presence of Class/Division 1.4 items. Separate 1.4 limits must be established to permit storage of 1.4 items. Storage compatibility requirements must be followed for all items in storage.
- (8) *Limit Placards.*
  - (a) *For Explosive Buildings.* Personnel and explosives limit placards are required for all buildings containing explosives. These will state the approved maximum total amount of explosives (by class/division) and personnel allowed in the building at one time. Each room or confined area in which explosives are handled will be similarly posted. Additionally, posting of personnel limits placards is required in inert spaces within explosive operating buildings; see paragraph (b) below. All placards will be of a uniform color (white background with red letters) and be posted in a location where they are immediately visible prior to entering the building or room. The location is acceptable if the sign is visible from the doorway.

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- (b) *For Inert Sites and Inert Confined Areas.* Personnel limits must be established and placards posted in rooms, cubicles, equipment and inert storage rooms, hallways, or other confined spaces in operating buildings, and in adjacent inert sites such as cargo boxes, sheds, etc., which are encumbered by intraline ESQD arc(s) from potential explosive site(s).
- (9) *Fire Hazard Symbols.* Fire hazard symbols are used to provide firefighting information and to denote the presence of explosives in operating buildings and magazines. When the explosive material that mandated the posting of one of these symbols has been removed from the facility, the symbols shall be removed. If all explosives have been removed from a facility, an EMPTY placard shall be posted. Fire hazard symbols shall be posted at each facility in accordance with Chapter 17.
- (10) *Red Flag.* A red flag shall be posted whenever personnel and explosives are present at a building at the same time. The flag may be attached to individual buildings or prominently displayed at the entrance to a magazine or operating building area.
- j. *Storage of All Hazardous Items.* Criteria governing hazardous material storage are:
  - (1) *Regulations.* Chapter 7 of this manual, IHDIVNAVSURFWARCENINST 11163.1, and NAVSEA OP 5, Vol. 1 provide regulations and criteria for magazine storage of explosives and certain other hazardous materials. SWO20-AC-SAF provides storage classification and compatibility criteria for ordnance items. Where operations require storage at elevated temperatures, such as curing, annealing, and drying, SOPs will specify the maximum length of time that heated storage is permitted and will require prompt packaging and transfer of material following completion of the operation.
  - (2) *Duration.* SOPs will also require that ammunition and explosives be removed to a magazine if they will not be involved in an operation for a period in excess of 108 hours. Overnight storage in operating buildings is only permitted if they are equipped with automatic sprinkler systems.
  - (3) *Compatibility.* New materials whose compatibility or stability has not been established must be stored separately and in as small a quantity as possible.
  - (4) *Containers.* Containers for storing and handling explosive materials should be made of or lined with a conductive material that has been determined compatible with the explosive. Lids must be designed to close properly and to prevent friction and pinching hazards. Glass containers will not be used for explosives (laboratory excepted). Exceptions require Code 04 approval.
  - (5) *Labeling.* Containers for explosives or other hazardous materials must be clearly labeled with the contents and degree of hazard in addition to other information required by the Hazardous Material Control and Management Program. See Chapter 24. When contents of containers are removed, all marking indicating the presence of hazardous materials, such as loading dates, lot numbers, DOT markings, etc., will be removed or obliterated and containers marked "empty." The three approved methods of marking containers "empty" are as follows: (a) Stencil the word "empty" in 1-inch-high letters on both ends or side of the container; (b) apply an empty label, NSN 7540-01-054-7252, on both ends or side of the container; or (c) attach a MIL-STD-129 tag properly authenticated and stamped "empty" to the container. If used, the tag must be protected from the weather. As a local control method only, fluorescent red tape may be used to indicate an empty weapon container instead of methods (a), (b), and (c) above. A durable colorfast material such as Scotchguard Hercu-lite is suited for this application. This local method involves positioning a ribbon across the center of an open container with approximately 12 inches extending past each side when the lid is replaced.

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The location/positioning of the red ribbon may be adjusted to account for different styles of ordnance containers, subject to the following guideline: it must be readily visible and located to encourage its removal during loading operations. Before off-activity shipment, the container must be marked in accordance with methods (a), (b), or (c) as well as have all ordnance markings removed/obliterated as discussed above.

- (6) *Excess Materials.* Material no longer required for a program will be removed from the plant area or magazine and managed and disposed of by an approved method. Priority shall be given to recycling, reusing, or selling excess material instead of thermal treatment. Refer to IHDIVNAVSURFWARCENINST 11163.1 for further details.
  - (7) *Records.* Records of storage arrangements shall be maintained so that the quantity and type of ammunition, ammunition components, or explosives in storage can be quickly determined and located. Departments will maintain records of items stored and space utilization in all assigned magazines. Refer to IHDIVNAVSURFWARCENINST 11163.1 for detailed information regarding record keeping.
- k. *Explosive Waste.* Handling of explosives waste will be as follows:
- (1) *Waste Minimization.* The easiest and cheapest way to deal with most explosive waste is to minimize it.
    - (a) Construct tooling and develop processes to minimize waste generation.
    - (b) Procure only enough material to fulfill existing requirements.
    - (c) Attempt to use excess material instead of procuring new material.
    - (d) Pursue new ventures to use existing excess materials.
  - (2) When approved by an SOP, laboratory personnel may leave up to one gallon of nonexplosive flammable waste solvent in the laboratory for a time not to exceed one week. At that point the material must be moved to a less-than-90-day site.
  - (3) *Waste Handling.* Segregate explosives waste materials to insure compatibility and store in approved color-coded and grounded containers. Refer to Chapter 14 for color code requirements. Conductive liners will be used when specified in SOPs. Accumulation of explosives waste materials in operating buildings must be minimized and shall never exceed the amount generated in one day's operation or the approved limit, whichever is less. Remove all explosive and combustible waste from operating buildings at least daily and before any building is vacated.
  - (4) *Explosives Waste Sheds.* New explosives waste shed designs shall be in accordance with PW Standard 13-1. New sheds require site approvals prepared in accordance with Chapter 14, and locations shall be approved by the Safety Department. These sheds can be used only for the quantities and materials specified by the site approval and are designed for short-term use only. Only compatible wastes shall be stored. Explosives wastes shall be held in the sheds only until the next regularly scheduled operation at the thermal treatment area. The Environmental Division shall be notified by the user of these sheds so that they can be registered as "less-than-90-day accumulation sites" under environmental regulations. Management of the explosive waste shall be in accordance with approved SOPs.
  - (5) *Water-Wet Explosives Waste.* Explosives waste compatible with water may be kept water-wet only if an environmentally acceptable method to dispose of the water is available. Waste with standing

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water will not be accepted for disposal. Waste will not be kept water-wet outside or in an unheated building when in danger of freezing (generally between 15 October and 15 April). If required for safety reasons, a compatible antifreeze agent, approved by Code 041, may be added to water-wet waste. Damp (drained) explosives waste may be kept outside year round.

- (6) *Treatment.* Explosives waste and other explosive-contaminated hazardous waste will be treated in the safest possible manner and under environmentally approved methods. Efforts must be made to reduce contamination of the atmosphere to a minimum. Treatment procedures will be reviewed and approved by Code 04. Treatment and disposal procedures are required for all new materials prior to first production.
- (7) *Treatment Form.* All explosives waste material sent to the production thermal treatment point or other permitted disposal area must be accompanied by a properly filled out "Explosives Waste for Thermal Treatment" form. For special explosives materials not handled on a routine basis, the Safety-approved method of disposal and any special hazards or precautions must also be indicated. Explosives waste not properly packaged for disposal will be returned to the generator.
- (8) *Oxidizer Disposal.* All oxidizers when contaminated with a combustible, an organic, or a metal and ammonium perchlorate when ground to 15 microns or smaller as measured by Fisher Sub Sieve analysis method shall be considered explosive and may be treated at the Strauss Avenue Thermal Treatment Point (SATTP). All noncontaminated oxidizers and ammonium perchlorate whose average particle size is larger than 15 micron are not considered explosive and shall not be treated at the SATTP.
- (9) *Slums.* Sawdust and other Safety-approved absorbents are often used to hold explosive and explosive-contaminated liquids for thermal treatment. Adequate absorbents must be used to prevent free standing liquid.

1. *Limitations of Waste Materials Sent to Caffee Road and Strauss Avenue Thermal Treatment Areas.*

- (1) Per our interim Subpart X permit, only explosive and explosives-contaminated materials may be treated at these areas. IHDIVNAVSURFWARCENINST 4570.2F provides additional information on this issue.
- (2) For material to be considered explosives-contaminated, there must be first-hand evidence of physical contact of the material with explosives. Material is not considered explosives-contaminated simply because it was in the vicinity of explosives. Examples:
  - (a) A cardboard container is lined with a conductive plastic bag containing explosive material. When the bag is removed, the container is general trash if there is no evidence that the bag leaked. If there is evidence of leakage, the container is treated as explosives-contaminated.
  - (b) Shipping containers or dunnage for rocket motors are not considered explosives-contaminated unless there is leakage or exudate evident.
- (3) The first-level supervisor is responsible for deciding if materials are contaminated through visual inspection and knowledge of the state of the explosives and packing configuration. Materials that are not explosives-contaminated, hazardous for any other reason, or controlled waste shall be disposed of as general trash after any markings indicating the presence of explosives are removed/obliterated. See paragraph 4.8j(5) for further information on empty containers.

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- m. *Gum Rubber Hoses.* Unless specifically exempted by the Safety Department for a designated period of time, all hoses used in nitrate ester service will be replaced at intervals not to exceed 6 months or sooner if required. Hoses will be indelibly marked with the date of expiration.
- n. *NG Killer* (also called Skunk Juice, a mixture of sodium sulfide, water, and acetone that decomposes nitrate esters). Containers of NG Killer will be dated at the time of preparation. Because of a loss of effectiveness, NG Killer more than 60 days old will not be used for the final decontamination step in a cleanup operation. NG Killer is never to be added to standing liquid or unabsorbed nitrate ester because it could cause a violent chemical reaction. Contact the Safety Department for assistance in cleaning up all nitrate ester spills not covered by instructions in the SOP.
- o. *Nitrate Ester Storage.* As a general rule, nitrate esters will not be stored unless they have been desensitized and a sufficient quantity of a suitable stabilizer added to prevent decomposition. Exceptions to this rule, such as TMETN and TEGDN (stabilized but without desensitizer), must have prior Code 04 approval. Nitrate esters will be stored only in approved, properly heated facilities. During prolonged plant shutdowns in cold weather, nitrate ester storage should be concentrated to the greatest extent possible without exceeding approved building limits. Buildings must be checked on a regular basis to ensure the heating system is working.
- p. *Nitrate Ester Desiccators.* Each desiccator in nitrate ester service will be included in a preventive maintenance program detailed in an operating SOP, and a current inspection date must be verified each time the desiccator is filled.
- q. *Transportation.* Ammunition and explosive items must meet the requirements of 49 CFR for transportation off the activity. To be legally shipped, each item must have either a final hazard classification with EX number or a current interim hazard classification. NAVSEAINST 8020.8A and 8020.17 detail the requirements for obtaining a shipping hazard classification.
- r. *Explosive/Chemical Decontamination.* Before manufacture of new ammunition and explosives, there shall be established procedures for chemical and explosive decontamination to render systems or explosives safe for maintenance or disposal in an environmentally safe manner.
- s. *Hazards of Electromagnetic Radiation to Ordnance (HERO).* Radio frequency transmissions can, under certain circumstances, provide enough energy to initiate EEDs (such as squibs, blasting caps, igniters, and similar electrically initiated, sensitive explosive devices) and flammable liquids and vapors. This phenomenon occurs when metal in the vicinity of these items or atmospheres or in the EED itself acts as a receiving antenna for radio-frequency energy and then discharges this energy to surrounding items. This potential energy discharge, which will be in the form of a spark, in the presence of a hazardous or sensitive environment could cause ignition of these environments. Because of this potential for serious consequences when HERO is involved, the use of transmitters is closely controlled. Government-owned hand-held and vehicle-mounted units, CB radios, cellular phones, etc., must all comply with IHDIVNAVSURFWARCENINST 5101.3C, which governs the registration and use of transmitters. The use of all privately-owned hand-held and vehicle-mounted units, CB radios, and cellular phones is prohibited in the restricted area. Adherence to the safety rules for the use of transmitters must be followed at all times. See Chapter 9 for locations where radio transmissions cannot be made. These locations are called "radio silence zones" and are identified with signs and red lines on roadways.
- t. *All Temperature Controlled Operations.* Facilities in which monitoring and controlling temperature is required have many different names: dry houses, conditioning chambers, environmental test chambers, curing ovens, soaking ovens, annealing ovens, surveillance ovens, and flashing ovens. No other attended

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operations shall be conducted in the bay or oven when explosives are in the ovens. When ovens are in use, the area shall be posted as to type of material under test, time material was placed in the oven, and the time material should be removed.

- (1) Ovens used for explosive or flammable operations should include the following features:
    - (a) Adjustable thermostat to be set for the desired oven temperature.
    - (b) Adjustable high temperature backup thermostat to be set 5 to 15 °F above the desired oven temperature depending on the sensitivity of the thermostat.
    - (c) Fixed high temperature limit control with manual reset to shut off power to the oven if the adjustable high temperature backup thermostat fails. This high temperature limit control shall be set slightly above the maximum temperature at which the oven will be used.
    - (d) An oven temperature alarm, either audible or visual, to indicate a temperature above the desired temperature and hence a failure of one of the temperature controls. If a visual alarm is used, it shall be a flashing amber light.
  - (2) The following features should be evaluated on a case-by-case basis as possible mitigation of high risks identified during a hazard analysis:
    - (a) The oven temperature alarm may be connected to the Fire Protection Division's alarm circuit to provide early warning of a hazardous condition.
    - (b) Venting requirements need to be evaluated. Blowout roofs, walls, or doors can provide needed vent areas.
    - (c) Temperature displays located outside the temperature-controlled bay or room may be required for very heat-sensitive operations where personnel exposure should be minimized.
    - (d) Spark-resistant interior construction may be required for ovens containing dusty or subliming explosives.
    - (e) Lights and other electrical apparatus may be required to be explosion proof as defined by Article 500 through 504 of the National Electric Code for the hazardous conditions that are or could be present in the oven.
  - (3) If liquids may be present, provisions should be made to contain spills and facilitate cleanup efforts. If liquid nitrate esters are present, spill containment and sanitary construction shall be mandatory.
- u. *Air Handling Systems.* There are two types of air-handling systems that require special treatment when they are present in explosives processing buildings.

- (1) Exhaust ventilation systems have the primary purpose of removing dusts, fumes, or vapors to protect personnel from the toxicological effects of the chemicals or to keep concentrations of combustible dusts and flammable vapors below the lower explosive limit. A ventilation system may collect small quantities of explosive dusts or vapors. Exhaust ventilation systems shall be cleaned on a regularly scheduled basis to prevent explosive buildup in ducts, and a maintenance log shall be maintained.



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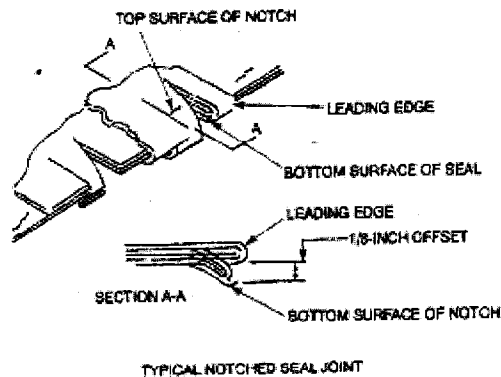
For exhaust ventilation systems that are subject to buildup of explosives contaminants, a hazard assessment must be performed and written procedures developed specifying cleaning frequency and methods to minimize risks to operations and the cleaning crew.

- (2) Explosives collection systems have the primary purpose of removing finely divided explosives, i.e. chips, dusts, shavings, etc., from the area to minimize the probability of an explosive incident or lessen its severity. Explosives collection systems are most commonly used when propellants and explosives are machined. Explosives dusts shall be removed from the collection chambers at least once every shift to eliminate unnecessary and hazardous concentrations of explosives, and the entire system shall be cleaned weekly, dismantling the parts if necessary. In dry collection systems, two collection chambers shall be installed in series ahead of the pump or exhauster.

Air-handling systems that handle explosives or explosively-contaminated air streams shall be designed and constructed in accordance with section 14.15. Cleaning of both types of systems shall be performed as directed by an approved SOP.

- v. *Notch-Sealed Joints.* All notch-sealed joints on propellant, explosive, and pyrotechnic containers shall be visually inspected to ensure compliance with the following conditions:

- (1) The strapping and seals are manufactured in accordance with the proper specifications:
- *Strapping.* ASTM D3953 Heavy Duty Type I (flat), Finish B, Grade I (galvanized, heavy coating). The size (width and thickness) of strapping shall be as specified in the military standard dash number sheet.
  - *Seals.* ASTM D3953 Class H (heavy duty), Finish B, Grade I (galvanized, heavy coating), Style I, II, III, or IV. Seal width shall be the proper width for the size of strapping being used.
- (2) The ends of both straps joined by the seal are visible on either end of the seal.
- (3) Each seal consists of two notches which are approximately centered and equally spaced on the seals. See figure below.



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- (4) The bottom surface of the notch is offset at least 1/8 inch from the bottom surface of the seal or approximately four times the thickness of the strapping. See section A-A in the figure. This condition creates a separation between the leading edge of the notch and the balance of the seal. A properly functioning sealer tool should accomplish this if the person using the tool closes the handles all the way when creating the notch.
  - (5) Periodic testing of the notch tools is no longer a requirement. However, should any doubt arise as to the effectiveness of a particular notch tool, the tool may still be tested in accordance with the procedures detailed in the applicable military standard.
- w. *Fired/Spent/Contaminated Ordnance.* All fired and or spent ordnance shall be treated as contaminated material and shall be tagged with a red certification tag, NDW-NAVORDSTA 4035/29, "Explosives Decontamination Tag-Dangerous," prior to high-temperature desensitization at Caffee Road or at the solid waste recycler. After successful treatment, the item shall be tagged with a green certification tag, NDW-NAVORDSTA 4035/30, "Explosives Decontamination Tag-SAFE." All items previously containing propellants/explosives must be affixed with a green certification tag prior to final disposition at the Property Disposal Office.

**4.9 Electrostatic Control.**

- a. *General.* Accumulation of static electricity presents a hazard where exposed explosives, flammable solvents, electroexplosive devices (EEDs), or practically any finely divided combustible material is involved. The spark generated when an accumulated static charge is discharged often contains enough energy to ignite or initiate these materials. It is necessary to prevent the accumulation of static charges by grounding the equipment, material, and the operator to dissipate any charge that may form, and by using conductive or antistatic material. The following paragraphs provide operation procedures and requirements for electrostatic control. Materials and situations that are electrostatic sensitive require additional precautions. The following items are sensitive to electrostatic discharge (ESD), and therefore require additional precautions:
  - (1) Explosives or explosive mixtures that are sensitive to static discharge when they are exposed are usually primary explosives and incendiary or pyrotechnic mixtures. A list of explosives, volatile chemicals, and EEDs that contain some of the materials that are susceptible to ignition by static discharge is given below. This list is not exhaustive and any material that is initiated by discharges of less than 0.01 joule when tested (5,000 volts, 20 consecutive failures) should be considered part of this list. It should also be noted that these materials can be desensitized. One method of doing this is to wet the material with water. A partial listing of ESD susceptible explosives includes:
    - Black powder
    - Diazodinitrophenol
    - Igniter compositions
    - Lead azide
    - Lead styphnate
    - PNC
    - 80/20
    - A1A

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- (2) Volatile chemicals often form flammable or explosive concentrations in air that are ESD sensitive. Typical sources of flammable vapors are fuels, ethyl ether, ethyl alcohol, ethyl acetate, acetone, benzene, and naphtha.
- (3) EEDs such as squibs, detonators, and primers may be initiated by very small electrostatic discharges. Static discharges may also be strong enough to break down the insulation within the EED and cause it to fire. Although not common, some EEDs have been designed that are not ESD sensitive. "EED" is not synonymous with "ESD sensitive."
- (4) If an item is required to be identified as conductive, this may be accomplished either by labeling the item "conductive," or if because of the size of the item it is impossible to label the item as "conductive," the following symbol shall be used. This symbol depicts a reaching hand with defined fingers and fingernails in a contrasting triangle. Around the outside of the triangle is a bold arc. This figure shall not be sized to less than 1/2 inch square. The choice of color is arbitrary but the color red shall not be used.



- b. *Conductive Floors.* In ESD sensitive areas (discussed above) conductive floors are an OP 5 requirement. Conductive floors are a local requirement in most of our operating buildings even though they are not required by OP 5. In general, the local requirement is to have conductive floors wherever any explosives, flammable solvents, or EEDs are exposed. They are present because they provide some additional protection from static, are easy to clean, and provide operational flexibility. Decisions about adding or removing conductive floors shall be made jointly by the Safety Department and operating departments. Conductive floors are required to have a minimum and a maximum resistance. The minimum resistance requirement is based upon the peak voltage supplied to the room or area. The minimum resistance shall be 5,000  $\Omega$  for 110 Vac service, 10,000  $\Omega$  for 220 Vac service, and 20,000  $\Omega$  for 440 Vac. The maximum average resistance shall be 1,000,000  $\Omega$  with no single area greater than 5,000,000  $\Omega$ . Conductive floors must be tested at installation and at least every 24 months thereafter. In dirty, dusty, or high hazard areas, consideration should be given to testing every 12 months. All floors will be visually checked every 6 months.
- c. *Conductive Mats.* Conductive mats are used to relieve operator fatigue and in lieu of conductive floors in some situations. At Indian Head, the mats must be connected directly to the static ground system and must meet the resistance and testing frequency requirements for conductive floors. In general, conductive mats are not permitted in areas where loose powders, dusts, or chips are processed or handled because of concerns about explosive accumulation and the need for regular cleaning. In all areas where conductive mats are permitted, good housekeeping around conductive mats must be maintained to prevent buildup of explosive material.

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- d. *Ground Grab Bars.* Ground grab bars shall be installed just outside the entrance doors to buildings in which open black powder is handled. All persons entering these buildings shall momentarily grasp the grab bar to dissipate accumulation of static electricity.
- e. *Conductive Table Tops or Bench Tops.* These are required by OP 5 in any area where ESD sensitive materials are handled. Our local requirement is to have conductive table/bench tops wherever bare/dry explosives or flammable solvents are used. They shall be tested every 14 months. The resistance shall not exceed 100,000  $\Omega$  and they must be labeled as conductive. The minimum resistance requirements discussed under the conductive floor heading apply to table and bench tops if line voltage is in reachable distance. On a case-by-case basis, if ventilation or other means can be used to positively reduce the concentration below the flammable concentration, the conductive requirement can be deleted from areas such as lab hoods.
- f. *Carts, Dessicators, and Other Similar Wheeled Objects.* Carts are used to transport and hold materials. To provide an added measure of safety, all carts used with ordnance must be equipped with at least one of the following: conductive wheels, drag chains, or drag straps. Conductive wheels have not proven durable or reliable for some applications; therefore, their use should be carefully considered. All carts shall be designed to ensure that the resistance from any point on the cart to the conductive floor is less than 250,000  $\Omega$ . Carts that are used in ESD hazardous areas must be—
  - (1) Tested every 24 months to ensure continued compliance with the resistance requirement. The testing shall be from each tray or shelf through the conductive wheels to ground.
  - (2) Labeled as conductive.
  - (3) Labeled to show the date the item needs to be retested.

Carts that fail the retest may be repaired and retested. Carts that continue to fail the resistance test shall be labeled as nonconductive and removed from service in ESD hazardous areas.

Since all carts are required to be grounded when parked, the construction of all carts is important to providing a positive ground path. A welded joint will provide a positive ground as long as the weld is structurally sound. Corrosion and foreign material can break the ground path through bolted, slip-fit, or pinned joints. Therefore, cart handles that are slip-fit in place shall not be used as a point of attaching a ground strap. Hinged joints that are constructed of corrosion-resistant materials provide a positive connection for grounding if lubricants are not used. Any means of connection that is part of the ground path other than a welded or hinged joint as discussed above shall be tested before its initial use and every 24 months thereafter. If other types of joints are present and are not tested, procedural and other controls shall be used to prevent their use as part of the grounding path.

- g. *Chairs, Stools, Portable Platforms.* If chairs, stools, portable platforms or any other similar device that could remove the operator from contact with the conductive floor or mat are used during ordnance operations, they should be specifically permitted in the SOP and extra precautions specified to ensure that the operator remains grounded. Some precautions that could be specified are ensuring the item is conductive, tested and labeled; specifying grounding the item prior to use; or requiring continuous contact of the operator's conductive shoes with the floor or other grounded object. In ESD sensitive areas, ensuring that the operator and the items remain grounded are especially important. Therefore, chairs, stools, or platforms that are used in ESD sensitive areas must be tested every 14 months and labeled with the date a retest is due and as conductive. Conductive chairs and stools shall be grounded by contact grounds and not by attaching a ground wire. Chairs that provide a ground path for personnel and therefore need to be

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conductive but cannot meet the resistance requirements via a contact ground shall be removed from service. The hazard necessitating the use of conductive chairs, stools, or platforms and any precautions associated with their use shall be addressed in the hazard control briefing contained in the SOP.

- h. *Air Hoses.* Air lines in all explosive operating buildings shall be equipped with a metal fitting/nozzle on the outlet end of the hose. This metal fitting shall be grounded to the static ground system. The preferred method for grounding mobile metal fittings is by using a hose that contains a continuous metal filament. A short length of the metal filament is exposed on each end of the hose and clamped to the metal inlet and outlet fittings.
- i. *Other Items.* Many other items such as containers, spatulas, tools, brooms, dust pans, plastic bags, etc., are of concern. In most situations the safety requirement is to use a material that will not generate static. In ESD sensitive areas, the items must be conductive if they come in direct contact with ESD sensitive materials. Anti-static items are acceptable for ESD sensitive areas if they will not be used to contain ESD sensitive materials. All conductive items are anti-static, but anti-static items are generally not conductive. Anti-static/conductive materials can be of two types: either the anti-static/conductive property is obtained by applying a coating or it is a material property that exists throughout the item. A couple of coatings that are applied to make the item anti-static/conductive are conductive paint and Zelac anti-static agent. Some examples in which anti-static/conductive is a material property and exists throughout the item are wood for anti-static and solid conductive plastic and metal for conductive. If the property is the result of coating and therefore does not exist throughout the item, then the item must be disposable (i.e., single use) or under a periodic retest program to ensure that the coating has not been damaged. Retesting of coated items will be determined based upon the coating, shall be determined on a case-by-case basis, and shall be approved by the Safety Department. Because of the possibility of the coating wearing off and the need to retest, re-usable coated items should be avoided. Material properties that exist throughout the item do not wear off. Therefore, retesting is not necessary. Testing of these items shall be conducted by receipt inspection, the operating plant, or the vendor. Maintenance of the records shall be the user's responsibility.

Items of all-welded construction do not need to be retested. Because corrosion can affect the conductivity at the juncture, metal items using any other construction method, i.e., bolts, pins, etc., need to be retested if the conductivity across the juncture is part of the path for static dissipation from the item. One exception is a hinge that is never lubricated and made of corrosion-resistant materials. However, if the material property is not obvious, such as for plastics or paints, it must be identified if it is conductive. If the part is stamped with a known brand name like "Velostat," it does not need any additional identification.
- j. *Testing.* The following paragraphs on testing for anti-static and conductive items are not intended to be a step-by-step procedure. This information, when used by a person knowledgeable in testing these types of materials, should allow the development of a test procedure that will comply with the requirements of OP 5 and good engineering practice.
  - (1) Anti-static. Materials are tested for anti-static properties in accordance with MIL-P-19644C with an Electro Tech systems 210 Electrostatic Field Meter (50 V to 5 kV) substituted for the 610 Electrometer and 2503 probe (50 V to 65 kV), Sweeney 1170 Electrostatic Transistorized Volt Meter (ETVM) with probes, or ElectroTech Systems (ETS) 105 with sensor head (50 V to 50 kV) and a 9-inch paint roller sleeve with 1/2-inch fiber pile of orlon/dynel instead of cat's skin and with the lower acceptance value of 350 as recommended by the table entitled "Acceptable Electrostatic Values for Calculations," in the report "Electrostatics" taken from the Chemical Engineering publication of 13 March 1967 instead of 2,000 V required by the specification.

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- (2) *Conductive.* A cursory test of conductive materials may be conducted using a standard multi-meter with needle point probes. Measurements are taken to reflect the conductive path and shall be taken internally and externally if applicable. If measurements of the entire object are not practical, a representative sample may be tested and adjusted mathematically to reflect the actual size of the object. The temperature and humidity of the anti-static and conductive materials affect the results and must be controlled to obtain reproducible results. The items shall be tested under worst case conditions under which the item could be used. Testing with a standard ohmmeter is a more stringent test. Items that fail the test with a multi-meter may be retested with a Megger (maximum of 500 V dc applied). Items that fail the resistance test with the Megger shall be rejected. An item that exhibits a resistance of less than 100,000  $\Omega$  across its entire ground path is considered conductive.

k. *Personal.*

- (1) Conductive-soled safety shoes are required for explosive operations in all areas where conductive floors have been provided. (See paragraph 11.9.c for conductive shoe requirements.)
- (2) Wrist straps can be used instead of conductive floors and conductive shoes if the restricted movement does not increase the hazard of the operation. Wrist straps must be tested prior to initial use each day and need not be retested unless the wrist strap is removed. Some wrist straps have built-in testers to continuously monitor the wrist straps to ensure their proper functioning. Wrist straps shall have a minimum of 25,000  $\Omega$  and a maximum of 1,200,000  $\Omega$ . The resistance shall be determined with a meter capable of testing 1,200,000  $\Omega \pm 10\%$ . It is recommended that wrist straps be purchased with a resistance of 750,000  $\Omega$ . A test log similar to the conductive shoe log must be maintained unless the wrist strap is connected to a tester to continuously monitor the resistance.
- (3) Cotton under and outer garments shall be used in ESD sensitive areas.

l. *Required Grounding.*

- (1) *Processing Operations.* All machinery and equipment used in the processing of explosives shall be bonded to the secondary ground girdle. The bonding resistance required for these items is less than 1  $\Omega$ . Permanent equipment in contact with conductive floors or table tops is not considered to be adequately grounded. This equipment shall be permanently connected by a suitable metallic conductor to a permitted ground.
- (2) *Spray Painting Operations.* Spray gun nozzles and the items being painted shall be grounded at the same point on either structural steel or a static ground during spray painting operations. Electrostatic paint systems shall not be used in areas where there are exposed explosives or EEDs or in areas where there is inadequate ventilation.
- (3) *Assembly and Disassembly Operations.* During assembly and disassembly operations, each individual section of a weapon shall be continuously grounded to a single point. This single point may be achieved by the use of an ordnance ground or static controlled area that uses a single grounding wire for the connection to a conductor leading to the secondary grounding system. Inert components of weapons only require grounding prior to mating with explosive components. Grounding can be achieved through the use of approved and tagged portable and attached ground cables.

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- (4) *Grounding in Magazines and Explosives Operating Facilities.* Contents of reinforced concrete, earth-covered magazines with secondary ground girdles and commercially built, pre-engineered "portable" magazines constructed of 3/16-inch or greater steel do not need to be grounded unless flammable gases, flammable liquids, exposed explosives, exposed EEDs, or damaged ordnance items are present. Contents of all other earth-covered magazines, permanent aboveground magazines, temporary aboveground magazines, and explosives operating facilities shall be kept grounded at all times. SOPs will identify where grounding is required in explosives facilities. Grounding can be achieved through the use of approved and tagged portable and attached ground cables.
- (5) *Grounding System Descriptions and Methods.* See Chapter 14 for information on the requirements for the various grounds, methods to be used to achieve the required grounding, and requirements of facility-related grounding.
- (6) *Maintenance, Inspection, and Testing of Ground Systems.* IHDIVNAVSURFWARCENINST 8020.2 identifies responsibilities, requirements, and procedures for maintenance, repair, inspection, and testing of the command's electrical grounding/bonding, conductive floor, and lightning protection test programs. NAVSEA OP 5 contains detailed information on the requirements for these programs.

**4.10 Procedures for Obtaining a Camera Pass.**

- a. NAVSEA OP 5 requires that any photography of operations that involve ammunition and explosives be subject to current safety and security restrictions. It also states that photographic aids such as electronic flash attachments and floodlights may be used when authorized by the commander if safety precautions are taken against possible effects on explosives, explosives dust, and flammable gas or vapor. These types of environments are defined as hazardous areas.
- b. Cameras are not explosion-proof, and flashes present additional hazards because of large energy discharges used to create the light needed. Their use needs to be strictly controlled for the sake of personnel safety and property protection.
- c. The following guidelines are provided for obtaining camera passes:
  - (1) *Non-Restricted/Non-Hazardous Areas.* Passes can be obtained through Codes IS and 8220. Code 041 is not involved in this process.
  - (2) *One-Time Use in Restricted Area.* Obtain a camera pass from Codes IS and 8220 and a work permit from Code 042B.
  - (3) *Multi-Use Pass in Restricted Area/Non-Hazardous Environments.* Obtain written authorization from Code 041 that use of the camera is authorized. This type of authorization will only be given for these areas where a hazardous environment does not exist, such as in a location where only assembled, fully enclosed items are present. Once Code 041 approval is given, obtain a camera pass from Codes IS and 8220.

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- (4) *Multi-Use Pass in Restricted Area/Hazardous Environments.* Prepare an SOP for use of the camera in a hazardous environment. The SOP shall follow as closely as possible the format of NAVORDSTAINST 8023.4. Upon approval of the SOP, a camera pass may be obtained from Codes IS and 8220. Users of the camera will have to be certified to the SOP prior to using the camera. Work permits will not be required, but users can be asked to provide verification that they are properly certified.

**4.11 Electronic Equipment.**

All electronic/electrical equipment such as pagers, calculators, video cameras, remote cameras, personal computers, micrometers, multi-meters, etc. which is used in any hazardous area shall be approved by Code 041. Televisions and radios are prohibited in explosive operating areas including processing, storage, and support buildings (e.g., control rooms) and areas that are classified as hazardous by the National Electric Code.

**4.12 References.** (Use latest revision of all references.)

NAVORDSTAINST 11016.1—NAVORDSTA Building Responsibility.

NAVSEA OP 5, Vol. 1, Fifth Revision—Ammunition and Explosives Ashore.

IHDIVNAVSURFWARCENINST 11163.1—Magazine Regulations.

Code of Federal Regulations, Title 49—Transportation.

OPNAVINST 5100.23—Navy Occupational Safety and Health (NAVOSH) Program Manual.

NAVSEAINST 8020.8—Department of Defense Explosives Hazard Classification Procedures.

MIL-STD-882—System Safety Program Requirements.

DOD Manual 6055.5—Department of Defense Occupational Health Surveillance Manual.

IHDIVNAVSURFWARCENINST 8020.2—Electrical Ground and Conductive Floor Preventive Maintenance Inspection and Test Program.

IHDIVNAVSURFWARCENINST 5101.3—Registration and Use of Radio Transmissions

NAVSEAINST 8025.5—Qualification and Final (Type) Qualification Procedures for Navy Explosives (High-Explosives Propellants, and Pyrotechnics)

IHDIVNAVSURFWARCENINST 4855.4—Production Readiness Reviews

EPA TSCA Chemical Inventory

SW020-AC-SAF-10—Transportation and Storage Data for Ammunition, Explosives, and Related Hazardous Materials

MIL-STD-129—Marking for Shipment and Storage

PW Standard 13-1—Explosives Scrap Storage Shed



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IHDIVNAVSURFWARCENINST 4570.2F—Procedures for the Decontamination/Treatment of Minute Pep Contaminated Scrap Metal, Equipment and other items

NAVSEAINST 8020.17—Navy Explosives Hazard Classification System

National Electric Code, Articles 500-504, Hazardous (Classified) Locations

MIL-P-19644C—Plastic Molding Material

"Electrostatics," *Chemical Engineering*, 13 March 1967.

NAVORDSTAISNT 8023.4,—Submission, Review, and Maintenance of Standard Operating Procedures

COMNAVFACENGCOM ltr. 2202RU

MIL-HDBK-1027/3A/B—Range of Facilities and Miscellaneous Training Facilities

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**INDIVNAVSURFWARCENINST.80205 Qualification/Certification**



DEPARTMENT OF THE NAVY  
INDIAN HEAD DIVISION  
NAVAL SURFACE WARFARE CENTER  
101 STRAUSS AVE  
INDIAN HEAD MD 20640-5000

IHDIVNAVSURFWARCENINST 8020.5  
Code: 04

05 AUG 2002

**IHDIVNAVSURFWARCEN INSTRUCTION 8020.5**

**From:** Commander

**Subj:** QUALIFICATION CERTIFICATION PROGRAM

**Ref:** (a) NAVSEAINST OP 5  
(b) NAVSEAINST 8020.9  
(c) OPNAVINST 8020.14  
(d) IHDIVNAVSURFWARCENINST 5100.22  
(e) NAVMED P-117  
(f) IHDIVNAVSURFWARCENINST 11163.1

**Encl:** (1) Certification Form  
(2) Initial TL Certification and PD Waiver  
(3) TM Certification 30-Day Extension Memo  
(4) Proficiency Demonstration for Explosive Certification  
(5) Certification for Off-Site Work Memo  
(6) Certification Extension Memo  
(7) Medical Waiver Review Board Memo

1. **Purpose.** To issue the Indian Head Division, Naval Surface Warfare Center (IHDIVNAVSURFWARCEN) Qualification Certification Program as defined in references (a) and (b) and to reiterate activity policy with regard to qualification and certification of personnel who perform ammunition and explosives (A&E) operations.

2. **Cancellation.** This instruction revises Chapter 2 of IHDIVNAVSURFWARCENINST 5100.22 reference (c), by removing Appendix 2A.

3. **Action.** All appropriate personnel will thoroughly familiarize themselves with this instruction. Supervisors will ensure that all personnel under their supervision who need to be part of the Qualification Certification Program are following the provisions of this instruction.

The major changes to the Qualification Certification Program include the elimination of the Instructor (IN), Official Observer (OO), Safety Observer (SO), and Inspector (IP) levels. Prior areas and Certification Board appointments as defined by department certification plans have been realigned to the appropriate new certification area as defined in this instruction. Establishment of new Certification Board appointments is at the discretion of the departments and will be established following this instruction. Recertification shall be performed following this instruction.

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Conversion of the In-training level to *Team Member* (TM), Operator and Lead Operator levels to *Team Leader* (TL), and current department established certification areas to the *new certification areas* will be implemented at the signing of this instruction.

The establishment and conversion of certification/re-certification dates (anniversary date for recertification) will be accomplished at the date of implementation of this instruction. The approval of the use of a certification extension (up to 90 days) during the initial implementation of this instruction is granted to help in establishing new anniversary dates for certification. This is a one time approval to use a certification extension for other than medical qualification issues, as defined by this instruction.

  
MARC A. SIEDBAND

Distribution:  
Department Heads  
Command Staff Offices  
Division Directors  
Branch Managers  
Department, Command, Division, and Branch Secretaries  
NIS

|

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IHDIIVNAVSURFWARCENINST 8020.5

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**Section 1**

**INTRODUCTION**

**1.1 Definitions.** For clarity and understanding of this instruction, it is recommended that a review of the List of Definitions of key terms included in Appendix A be done prior to reading individual sections of this instruction.

**1.2 Background.** Personnel error, ineffective and inadequate training, and failure to follow proper procedures are large contributors to explosive mishaps. The Navy's Qualification Certification Program (Qual/Cert) establishes qualifications to ensure safe handling of ammunition and explosives (A&E) by personnel and grants permission in the form of a certification of individuals who have attained their qualifications.

This instruction implements the requirements of NAVSEAINST 8020.9, "Ammunition and Explosives Personnel Qualification and Certification Program." It applies to all civilian government, military, and contractor personnel who are involved in A&E operations at:

- a. IHDIVNAVSURFWARCEN
- b. Another activity with operations under the control of IHDIVNAVSURFWARCEN
- c. Another site outside of Indian Head with the participation of IHDIVNAVSURFWARCEN personnel.

Personnel shall not perform A&E tasks unless properly qualified and certified as required by this instruction.

The Qual/Cert Program at IHDIVNAVSURFWARCEN relies on a multifaceted approach that links the Commander, who has overall responsibility and authority for qualification and certification, to line management and ultimately to the individual performing tasks on A&E.

The Certification Policy Committee chaired by the Commander establishes overall Qual/Cert Program policy. The Safety Officer, Code 04, is designated per this instruction, the Qual/Cert Program Administrator. As such, the responsibility for program administration and stewardship rest within Code 04.

Line management is an integral part of the Qual/Cert process. Line managers are ultimately responsible for training the personnel and evaluating their ability to safely perform A&E tasks through the proficiency demonstration and standard operating procedure (SOP) qualification process.

**1.3 Objective.** To provide policy and establish procedures concerning the overall Qual/Cert Program for IHDIVNAVSURFWARCEN per OPNAVINST 8020.14, "Department of the Navy Explosives

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Safety Policy," and NAVSEAINST 8020.9. This instruction serves as the Qual/Cert Plan for IHDIVNAVSURFWARCEN and establishes:

- a. Specific tasks requiring qualification/certification.
- b. Qualification standards of personnel competency; e.g., training and proficiency demonstrations (PD) and the level of supervision necessary for the safe and successful performance of a task.
- c. Procedures to follow to qualify and certify individuals.
- d. Official record keeping system.

**1.4 Scope.** The requirements of this instruction are applicable to all Indian Head Division Departments who have personnel involved in A&E operations except for Indian Head Division Detachments. Detachments must still meet NAVSEAINST 8020.9 requirements as well as complying with host organization Qual/Cert Program requirements.

**1.5 Supervisory Controls.** The supervisory control and oversight required of personnel performing A&E tasks is determined by the individual's certification status. Team Members (TM) are personnel certified to handle A&E only under the direct supervision of a Team Leader (TL) individual. TLs are personnel certified to handle A&E without direct supervision, and may provide direction to others. The process supervisor has the ultimate responsibility for ensuring individuals can perform assigned tasks safely per the SOP and other support documentation.

**1.6 Relationship Between Certification and SOP Qualification.** An individual is eligible for certification when they have met specific qualifications which include demonstrating the skills and ability to be able to perform A&E tasks in a particular certification area (CA). This qualification requirement is documented as a proficiency demonstration. Certification indicates the ability to work in a particular certification area.

The individual once certified, is then ready for job specific training so that they can safely perform specific A&E tasks. Once job specific training and SOP qualifications have been satisfied, the individual can be SOP qualified and is ready to be assigned A&E tasks governed by the SOP. Being SOP qualified then allows an individual to work on specific tasks within the certification area in which they are certified.

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**Section 2**

**RESPONSIBILITIES**

**2.1 Commander.** The Commander:

- a. Has the overall responsibility and authority for qualification and certification of personnel and delegates necessary authority to department heads.
- b. Chairman of the Explosive Safety Council.
- c. Assumes the chairmanship responsibilities of the Certification Policy Committee.
- d. Appoints Qual/Cert Board Chairpersons to execute the Qual/Cert program.
- e. Appoints Board Members.
- e. Approval authority for initial certifications.
- f. Certifying authority for individuals not performing PDs.
- g. Member of the Medical Waiver Review Board.
- h. Must authorize, in writing, all deviations by contractors from the requirements of NAVSEAINST 8020.9.

**2.2 Safety Department Head (Code 04):**

- a. Designated as the Qual/Cert Program Administrator.
- b. Member of the Explosive Safety Council/Certification Policy Committee.
- c. Responsible for the generation and maintenance of IHDIVNAVSURFWARCEN Safety Orientation for New Employees, Type I Hazard Control Briefing (HCB) and Chemical Hygiene Plan (CHP).
- d. Responsible for staffing, resources (including any record management system), equipment, and financial/budgetary levels necessary to effectively maintain the activity's Qual/Cert Program.
- e. Forward recommendations to the Certification Policy Committee concerning major Qual/Cert policy or system changes.

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f. Issue implementation and supporting documentation detailing operating instruction for the Personnel Certification System (PCS).

g. Monitor the Qual/Cert Program through audits and provide the Certification Policy Committee with an annual report on the effectiveness of the program.

h. Responsible for maintaining the Qual/Cert plan for the activity.

i. Monitor police/security training records to verify qualification requirements are maintained in accordance with governing regulations.

j. Audit Qual/Cert Plans of Indian Head Division Detachments to verify compliance with higher level guidance.

**2.3 Qual/Cert Board Chairperson:**

a. Designated as the certifying official.

b. Exempt from certification.

c. Forwards Qual/Cert board member nominations to the Commander for approval.

d. Forwards nomination requests to the Commander for establishing initial certification and approval as board member.

e. Responsible for approving certification, enclosure (1).

f. Responsible for revocation and suspension decisions and documenting the decisions.

g. Responsible for approving certification re-instatement plans.

h. Responsible for forwarding PD waiver/certification requests to the Commander, enclosure (2).

i. Makes recommendation to the MWRB whether the failure of part of the medical examination will adversely affect the employee's ability to perform the job.

j. Approve TM certification extensions, enclosure (3).

k. Appoint firing officers (through certification).

l. Approve contractor Qual/Cert plans.



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- m. Grant certification extensions.
- n. Issue suspension of certification.

**2.4 Qual/Cert Board Members.** Responsible for evaluating and recommending personnel for certification by performing observed/verified PDs, enclosure (4).

**2.5 Certification Policy Committee (Explosive Safety Council) shall:**

- a. Establish implementation procedures for the activity's Qual/Cert Program.
- b. Approve major policy or system changes involving the Qual/Cert Program.
- c. Review annually the effectiveness of the Qual/Cert Program through data supplied by Code 04.

**2.6 Department Head and Department Head Deputies in (Codes 09, 20, 30, 40, 50, 90) shall:**

- a. Submit nominations for certification board members and Qual/Cert Board Chairperson for the Commander's approval.
- b. Submit recommended changes for this instruction to Code 04 for submission to the Certification Policy Committee.
- c. Establish department safety training requirements to augment the mandatory qualifications required for certification.
- d. Designate a Qual/Cert Board Chairperson.

**2.7 Division Directors and Branch Heads (in organizations without Division Directors) that are responsible for personnel performing A&E operations shall:**

- a. Support the Medical Waiver Review Board and Qual/Cert Board Chairperson by submitting job-specific information and other pertinent requirements concerning medical waiver issues.
- b. Submit board member nominations to Qual/Cert Board Chairperson if chairperson is at Department Head level.
- c. Submit Qual/Cert information and SOP qualification status records as required by this instruction.
- d. Periodically monitor the PD process within their organization to make sure they are being done in accordance with this instruction.
- e. Submit off-site certification requests for their personnel, enclosure (5).

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- f. Implement department training requirements.
- g. Submit to the Qual/Cert Board Chairperson information supporting the revocation of certification process.
- h. Approve certification reinstatement plans.

**2.8 Immediate Supervisors of Employees Who Perform A&E Operations in Other Areas shall:**

- a. Support the Medical Waiver Review Board and Qual/Cert Board Chairperson by submitting job-specific information and other pertinent requirements concerning medical waiver issues.
- b. Submit off-site certification requests for their personnel.
- c. Implement department training requirements.
- d. Submit to the department head information supporting the revocation of certification process.
- e. Approve certification reinstatement plans.
- f. Submit all qualification status information to the Qual/Cert Coordinator indicating the status of qualification requirements for certification.
- g. Submit to Qual/Cert Coordinator, personnel requirements to support certification requests for contractors, external Navy employees (to IHDIVNAVSURFWARCEN), or IHDIVNAVSURFWARCEN employees who are not in the Qual/Cert Program or not currently certified in the appropriate area so they can be assigned to receive proper medical examinations, training, and enrollment in the Qual/Cert Program.
- h. Ensure employees fulfill scheduling commitments for medical and training requirements.
- i. Submit to Qual/Cert Coordinator, requests certification extensions.

**2.9 Immediate Supervisors of Employees Who Perform A&E Operations in an area of their responsibility shall:**

- a. Assign personnel to tasks only after they have been certified TM (activity wide) or TL area specific and qualified to the SOP.
- b. Ensure that TM certified personnel are adequately supervised on site by TL certified personnel at all times.
- c. Submit all qualification status information to the Qual/Cert Coordinator indicating the status of qualification requirements for certification.

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d. Submit to the Qual/Cert Coordinator, personnel requirements to support certification requests for contractors, external Navy employees (to IHDIVNAVSURFWARCEN), or IHDIVNAVSURFWARCEN employees who are not in the Qual/Cert Program or not currently certified in the appropriate area so they can be assigned to receive proper medical examinations, training, and be enrolled into the Qual/Cert Program.

- e. Submit to the Qual/Cert Coordinator, changes of qualification status of an individual.
- f. Ensure employees fulfill scheduling commitments for medical and training requirements.
- g. Perform PDs on employees if assigned as a board member.
- h. If not a board member, shall recommend to Qual/Cert Board employee is fit for certification.
- i. Assign process supervisor, if required.
- j. Appoint firing officers (through certification).
- k. Develop certification reinstatement plans.
- l. Submit to the Qual/Cert Coordinator, PD waivers.
- m. Submit to the Qual/Cert Coordinator, TM qualification extensions.
- n. Submit to the Qual/Cert Coordinator, certification extensions, enclosure (6).
- o. Submit certification documentation for non IHDIV personnel performing A&E operations to the Qual/Cert Coordinator.

**2.10 Process Supervisors shall:**

- a. Ensure operations to which they are assigned are conducted by employee's who are properly qualified and certified.
- b. Be certified at the TL level in all areas of assigned responsibility.
- c. Sign and date the SOP supervisor's statement and supervisor's validation statement and indicate employee's SOP qualification level.
- d. Sign the SOP worker's statement when using the SOP to perform a task. Another process supervisor shall sign the supervisor's validation statement and indicate the process supervisor's SOP qualification level.
- e. Perform PDs if board member.
- f. Submit SOP qualification information.

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**2.11 Individuals requiring certification shall:**

- a. Perform only those tasks for which they are qualified and certified.
- b. Inform their immediate supervisor and Branch Medical Clinic of any changes in their health that may impair their ability to perform tasks involving A&E.
- c. Sign the worker's statement in the appropriate SOP's being used in the performance of assigned tasks.

**2.12 Qual/Cert Coordinator shall:**

- a. Provide administrative support to the Certification Board and is the contact for PCS within their organization.
- b. Member of the PCS Working Group.

**2.13 Qual/Cert Program Coordinator shall:**

- a. Notify first line supervisors of any issues pertaining to qualification/certification.
- b. Provide administrative support to the Certification Policy Committee as it pertains to the Qual/Cert Program.
- c. Audit program providing results to Qual/Cert Program Administrator.
- d. Chair of the PCS Working Group
- e. Serve as PCS Administrator.

**2.14 Supply Officer (Code 11) shall:**

- a. Ensures that all contracts covering non-government personnel handling A&E contain the appropriate clauses and references as required by NAVSEAINST 8020.9 and section 8 of this instruction.

**2.15 Human Resources Organization (HRO) (Code 06) shall:**

- a. Input training attendance records in Automated Training System (ATS).
- b. Establish new employee records in the official HRO record keeping system and in PCS.

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**2.16 Firing Officers.** The Firing Officer has complete responsibility and authority for the safety of the test area being used and for the safe conduct of the tests. The officer shall:

- a. Be present during each firing.
- b. Be thoroughly briefed before firing time, and have an opportunity to conduct or participate in the planning.
- c. Have the SOP and supplemental documentation available at the site and ensure they are followed.
- d. Coordinate operations in the firing area.
- e. Control of the number of personnel in the firing area and the conditions under which they are permitted access to the firing area.
- f. Be responsible for all energetic materials in the firing area and when they are allowed to be delivered to the firing area.
- g. Be responsible for the setup of all energetic materials at the firing site.
- h. Determine when it is safe to connect the firing line to the initiating device.
- i. Be responsible for the firing.
- j. Follow safety procedures established by the SOP and supplemental documentation when dud, misfired, or malfunctioned ordnance is present in the test area.

**2.17 Medical Waiver Review Board shall:**

- a. Decide whether a person failing a physical examination may be certified to conduct specific operations on A&E.

**2.18 Branch Medical Clinic/Industrial Hygiene Office shall:**

- a. Provide medical support as necessary to comply with NAVMED P-117.
- b. Input appropriate medical data into PCS and provide to administrative supervisors.
- c. Provide direction and guidance pertaining to hazard based medical exams.
- d. Perform IH surveys as required.

**2.19 Magazine Operations Branch (Code 220).** Provide Basic Magazine Operation Course and refresher training as required by IHDIVNAVSURFWARCENINST 11163.1, "Magazine Regulations."

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**2.20 Contracting Officer's Representative (COR):**

Ensure all contracts involving A&E to be performed at Indian Head facilities, contain the following phrase:

- a. Contractor personnel performing A&E tasks under the scope of the contract must be covered by the contractor's (Qual/Cert Board Chairperson approved) or IHD NSWC Qualification/Certification Program.

**2.21 Information Technology Division (Code 053) shall:**

- a. Develop and support PCS to include customer training, system changes and development, etc.
- b. Issue user ids for PCS.

**2.22 Occupational Safety & Health (Code 042) shall:**

- a. Be a member of the MWRB.

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**Section 3**

**CERTIFICATION**

**3.1 Introduction.** The primary purpose of the Qual/Cert Program is to evaluate an individual's qualifications and to certify individuals to perform tasks on A&E. This section defines certification requirements.

**3.2 Personnel Requiring Certification.** All personnel handling A&E in the performance of a task or non task function that results in physical contact or interface with A&E.

**3.3 Personnel Exempt from Qual/Cert.** Security/Police personnel who carry weapons.

**3.4 Certification Levels.** Approved certification levels are as follows:

a. **Team Member (TM) Certification Level.** This level provides for certification necessary for all employees so they may start job-specific training to obtain Team Leader (TL) certification. A TM certified individual is certified in all certification areas except for the Unescorted Official and Engineering Investigation/Fleet Support areas, which only have the TL certification level. The TM certification level is recognized as a training level. As such, the TM certified individual must always be under the direct supervision of a TL certified individual. Qualifications for TM level certification are included in Section 4 of this instruction.

b. **Team Leader (TL) Certification Level.** This level provides certification in a specific certification area based on completing the qualification requirements outlined in section 4 of this instruction. This level of certification allows the individual to perform tasks on A&E independently and to perform the duties of a process supervisor or board member if so assigned.

**3.5 Certification Areas.** The established certification areas are as follows:

a. **A&E Manufacturing and Development.** Includes most operations/processes in the Applied Technology Department (Code 20), and developmental operations in Weapons Department (Code 40) except the following:

- (1) Magazine custodians
- (2) Maintenance of explosive-contaminated equipment
- (3) Lab operations
- (4) Yorktown Detachment (Code 240).

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b. **A&E Test and Evaluation.** Includes all operations in the Energetics Evaluation Department, (Code 30), Research and Technology Department, (Code 90), Applied Technology Department (Code 20) lab operations, and Weapons Department, (Code 40) testing operations, except for the following:

- (1) Magazine operations
- (2) Firing officers.

c. **Unescorted Officials.** This area covers all personnel who need unescorted access to facilities containing A&E, having physical contact with A&E by performing non task functions. Examples are personnel performing an investigation or inspection, line management or other management officials visiting the work area, safety inspectors, industrial hygienist, and ammunition distribution and control (AD&C) personnel doing magazine audits.

d. **Equipment Maintenance.** This area covers personnel who perform maintenance and repair, installation, or setup of equipment that is contaminated with explosives or propellant and results in the individual having hands-on exposure to the energetic material or item. This area also includes individuals who install squibs in the fire protection systems.

e. **A&E Magazine Operations.** This includes all A&E magazine operations, personnel performing magazine duties as magazine custodians.

f. **Firing Officer.** This area covers the personnel having responsibility for conducting ground or static fire tests requiring the initiation of energetic materials that have evolved from unique work as defined by OP 5, Appendix G. Examples of facilities or ranges that perform this type of work are:

- (1) Safety Test Point
- (2) A.P. Hill
- (3) Blossom Point
- (4) Bombproofs (Bldg. 1951-55)
- (5) Buildings 704, 544, 602, and 1443.

Personnel (who perform routine ground or static fire tests) are included in the A&E Test and Evaluation certification area.

g. **Engineering Investigation.** This area covers all individuals involved in performing engineering or accident investigations and other fleet support duties that require the handling of A&E.

### **3.6 First-Time Certification.**

a. **First Time TM Certification.** First-time TM certification is granted in two phases. Phase 1 is a 30-day initial training period where the individual must complete certain mandatory qualification requirements. If the requirements are met the individual maintains TM certification and proceeds to Phase 2, consisting of specific training to become eligible for TL certification.



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b. **First Time TL Certification.** First Time TL Certification is required for:

- (1) The first time an individual is TL certified to a certification area
- (2) Recertification of an individual whose certification has been revoked
- (3) Recertification of an individual who has not worked in that certification area during the last 12 months.

**3.7 Recertification.** See Definition in Appendix A.

**3.8 Initial TL Certification (Initial Board Member Approval).** Where no TL certified individual exists for a certification area, initial TL certification procedures must be used. Line management shall submit via the Qual/Cert Board Chairperson the request for certification (and Board Member approval) to the Commander.

**3.9 Certification Without Proficiency Demonstration.** If a situation should arise where it is impractical to perform a PD, the Commander can approve/waive the PD as a qualification requirement and certify the individual. Line management will submit the request to the Commander via Qual/Cert Board Chairperson.

**3.10 Duration of Certification.**

- a. TM — 12 months (for first time TM certification up to 1 month for phase 1, remainder for phase 2)
- b. TL — 12 months.

**3.11 TM Certification Extension.** Failure to meet Phase 2 requirements in 30 days will result in suspension of TM certification. The employee's supervisor must submit justification to the Qual/Cert Board Chairperson for a TM certification extension outlining reasons and the timeframe required to meet Phase 2 qualifications.

**3.12 Certification Extension.** Extension of certification (90 days maximum), can be granted for failing to meet medical qualifications for any of the following reasons:

- a. Difficulty in scheduling medical examination
- b. Results of medical examination pending
- c. Discussions occurring between employee's private physician and the occupational health physician to resolve health issues as they pertain to certification.
- d. Awaiting medical waiver approval process.

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The Qual/Cert Coordinator will monitor medical status and if an extension is required and meets the criteria listed above will automatically grant the extension.

**3.13 Certification of Non-Indian Head Individuals.** Certifying non-Indian Head individuals is done following the same procedures as for Indian Head personnel.

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### Section 4

#### QUALIFICATION REQUIREMENTS FOR CERTIFICATION

**4.1 Qualification Requirements.** To obtain Qual/Cert board certification an individual must meet certain qualifications. The qualification requirements for certification at the TM or TL certification level are found in paragraphs 4.2 and 4.3.

**4.2 Standard Qualification Requirements.** Standard qualification requirements apply to all certification areas except for Unescorted Official and Engineering Investigation. Table 4-1 displays the standard qualification requirements necessary for TM and TL level certification for first time certification and recertification.

Table 4-1. Standard Qualification Requirements<sup>a</sup>

Requirements	Observed PD	Verified PD	Explosive handler physical	Basics of naval explosive hazard (OP 6)	Chemical hygiene plan <sup>b</sup>	Type 1 HCB	Safety orientation for new employees	TM certified
<b>TM Certification</b>								
First Time								
Phase 1								
Phase 2 <sup>c</sup>	X		X	X	X	X	X	
Recertification		X	X					
<b>TL Certification</b>								
First Time	X		X		X <sup>d</sup>			X
Recertification		X	X		X			

<sup>a</sup>Unescorted Officials and Engineering Investigation areas have no standard qualification requirements.

<sup>b</sup>For personnel working in chemical laboratories.

<sup>c</sup>Complete within 30 days after Phase 1 certification.

<sup>d</sup>If received/reviewed Chemical Hygiene Plan in past 12 months, then not required for first time TL certification.

**4.3 Specific Qualification Requirements.** For Magazine, Unescorted Official, and Engineering Investigation areas, there are qualifications required in addition to the Standard Qualification Requirements for TL certification and are displayed in Table 4-2.

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Table 4-2. Specific Qualification Requirements for Team Leader

Requirements	Magazine area		Unescorted official		Engineering investigation	
	First time	Recert	First time	Recert <sup>a</sup>	First time	Recert <sup>b</sup>
Mist Class <sup>c</sup>					X	
Explosive Handler Physical					X <sup>d</sup>	
Magazine Refresher <sup>e</sup>		X				
Experienced A&E <sup>f</sup>			X			
Basic Magazine OP Class	X					
Type I HCB			X		X	
Professional Personnel					X	

<sup>a</sup>Automatic if no notification given to QCB to remove certification.

<sup>b</sup>Automatic recertification except if explosive handler physical is required.

<sup>c</sup>Mishap Investigation Support Team (MIST) personnel only.

<sup>d</sup>Only required if performing a task of A&E (see definition).

<sup>e</sup>Refresher required every 3 years.

<sup>f</sup>Minimum 1 year A&E experience or successful completion of Basics of Naval Explosive Hazard.

**4.4 Qualification Requirements for Non-Indian Head Personnel.** When non-Indian Head personnel need to perform A&E tasks at Indian Head Division facilities, they must be certified by the Certification Board. The following are the qualification requirements necessary for certification:

a. Other Navy/Marine Corps Personnel certified by their activity:

(1) **TM Certification**

(a) TM or TL certified by "home" activity

(2) **TL Certification**

(a) TL certified by "home" activity in certification area that covers task to be accomplished.

b. Non-A&E certified Navy/Marine Corps, other government, and contractors:

(1) Qualifications are the same as the standard and specific qualifications in sections 4.2 and 4.3 except the explosive handlers physical can be completed by the individual's own physician.

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**Section 5**

**QUALIFICATION/CERTIFICATION BOARD**

**5.1 Introduction.** The Qual/Cert Board (QCB) is responsible for certification of employees. This section describes the relationship between the certification board and the certification process.

**5.2 Establishment of the QCB.** The QCB is established to act as the certifying authority for personnel performing tasks involving A&E. The members of the QCB will be approved by the Commander. QCB board members are nominated by line management (division head or above) via the QCB Chairperson to the Commander.

**Note**

Guidance/procedures are included in para. 3.8, Initial TL  
Certification/Board Member Approval, for establishing board members  
when no TL level certified employee exists in a certification area

**5.3 Board Member Nomination Procedures.** An integral part of the certification process is performing PDs. Board members are responsible for performing PDs (observed/verified) and making recommendations to the QCB Chairperson. Board members are nominated and approved by the following process.

a. Line management (division head or higher) will forward board member nominations to the Commander via the QCB Chairperson. To be a board member, the individual must be TL level certified in the certification area for which they are nominated. They maintain board member status as long as they maintain TL level certification and line management concurrence. QCB Chairperson may remove an individual from board member status.

**5.4 Revocation of Certification.** The immediate supervisor is responsible for initiating revocation procedures when revocation is required. The Chairperson will formally document the revocation action. The Qual/Cert Coordinator will delete SOP qualification status on all the SOPs for which the individual is qualified and those for which they are in training status by modifying SOP records in PCS. The immediate supervisor will insert the new worker's statement page in the appropriate SOPs.

The employee must be removed from performing all A&E tasks and assigned to non-A&E duties until certification is reinstated. For reinstatement of certification the immediate supervisor must develop a Certification Reinstatement Plan that outlines the retraining of the employee and concentrates on the circumstances that caused the revocation to help preclude the event from happening again.

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If the demonstrated behavior of the employee during this process reveals that the employee cannot successfully complete the requirements outlined in the reinstatement plan, the employee is to be assigned to duties not involving A&E.

**5.5 Suspension of Certification.** Suspension of certification will be issued in writing to employees by the QCB Chairperson and his/her immediate supervisor. A suspension will be issued when certification has expired or an individual is involved in an explosive mishap. The immediate supervisor shall immediately remove an individual from working with A&E when notified that a certification has expired. The Qual/Cert Coordinator will notify the immediate supervisor when certification has expired.

On notification that an individual has been involved in an explosive mishap, the supervisor shall immediately remove the individual from A&E operations and start the suspension process. The suspension memo will be generated by the QCB Chairperson and will be forwarded to the immediate supervisor who will give it to the individual within one workday of certification expiration or involvement in an explosive mishap. Reinstatement will be issued in writing to employees by the QCB Chairperson and his/her immediate supervisor.

**5.6 Medical Waivers.** The QCB is the focal point for coordinating medical issues between the supervisor and the Medical Waiver Review Board (MWRB). The primary responsibility of the MWRB is to decide whether an employee having a disqualifying medical condition can meet certification requirements to perform A&E tasks. The MWRB consists of the Commander, Occupational Health Physician, the employee's immediate supervisor, and Director (OSH Division, Code 042).

The immediate supervisor, when notified of a disqualifying medical condition by the Occupational Health Physician, will evaluate the individual's work environment requirements and pertinent facts regarding the disqualifying medical condition. If the supervisor feels that the individual can still safely handle and perform A&E tasks, then he/she will initiate the medical waiver process, enclosure (7). It is the responsibility of the QCB Chairperson and the employee's immediate supervisor to evaluate each individual case and make a recommendation to the MWRB whether the failure of part of the medical examination will adversely affect the employee's ability to perform the job. Since the medical requirements are intended to cover the full spectrum of explosives operations, it logically follows that all the requirements may not apply to every position. Some cases may require that SOPs or other supplemental documents be modified to incorporate job controls to address medical restrictions. These job controls must be included in the waiver request.

Medical waivers must be submitted for any of the following circumstances:

- a. The employee is found to have a disqualifying medical condition at the time of the explosives handler's physical examination.
- b. The employee has an existing medical waiver but a change in certification area/work conditions requires changes to waiver requirements to meet certification requirements.

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c. The medical or physical condition changes, prompting medical restrictions requiring alternate procedures or accommodations to maintain the qualifications to be certified to handle A&E.

The MWRB will evaluate the medical condition of the employee and the actions or requirements presented by the supervisor that will ensure the employee can safely perform A&E tasks. The MWRB will approve or disapprove the waiver request and this decision will become part of the individual's certification record.

The medical waiver will be submitted and evaluated each time the individual has an explosives handler's physical and at any time the work or medical conditions of the employee change. If conditions change, the immediate supervisor must submit a new request for waiver.

If a disqualifying medical condition is such that an individual cannot be certified to handle A&E, he/she must be removed from A&E duties and as signed to non A&E tasks.

The medical waiver must be strictly followed by the immediate supervisor when assigning specific tasks. It is recognized that in some cases accommodations cannot be made to satisfy the requirements of the waiver; therefore, the employee cannot be qualified to a particular SOP. It is the immediate supervisor's responsibility to ensure that the employee's medical restrictions have no adverse impact on the safety of the employee or the safety of others.

**5.7 Certification.** Certification is the process of assuring an individual has met the qualification requirements for conducting A&E operations. The Certification Board is the approval authority for issuing certifications.

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- (e) Record of observed PD
- (f) Certification Record
- (2) First-time TL Certification Documentation
  - (a) Record of observed PD
  - (b) Certification Record
  - (c) Record of Chemical Hygiene Plan (Chemical Lab Personnel only) if required
- (3) Medical Waiver documentation and decisions
- (4) Suspension action documentation
- (5) Revocation action documentation

b. Temporary (maintain for 5 years). All other documentation actions of the Qual/Cert process and SOP qualification documentation (example: hazard base medical results, license, respiratory protection fit test and training).

**6.4 Job Specific Qualification.** There are SOP-specific and job-specific qualifications that are required to be met before an individual can be qualified to perform a specific task. The associated medical and training qualifications necessary to be SOP qualified to perform in a particular position are found in Table 6-1.

**6.6 Training and License Information.** If an employee is exposed to any work-based hazard, he must be enrolled in the hazard-based medical examination for that exposure and the baseline medical examination be performed before being assigned to perform work. The most common hazard based medicals required at IHDIVNAVSURFWARCEN and their frequency are listed in Table 6-2. These hazard based medical examinations will be identified in the Industrial Hygiene Survey.



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- (e) Record of observed PD
- (f) Certification Record
- (2) First-time TL Certification Documentation
  - (a) Record of observed PD
  - (b) Certification Record
  - (c) Record of Chemical Hygiene Plan (Chemical Lab Personnel only) if required
- (3) Medical Waiver documentation and decisions
- (4) Suspension action documentation
- (5) Revocation action documentation

b. Temporary (maintain for 5 years). All other documentation actions of the Qual/Cert process and SOP qualification documentation (example: hazard base medical results, license, respiratory protection fit test and training).

**6.4 Job Specific Qualification.** There are SOP-specific and job-specific qualifications that are required to be met before an individual can be qualified to perform a specific task. The associated medical and training qualifications necessary to be SOP qualified to perform in a particular position are found in Table 6-1.

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Table 6-1. Training and Hazard Based Medical Qualifications

Job	Job-specific training	Training frequency	Hazard base Medical	Medical frequency
Explosive Driver (on activity only)	Explosive Driver license (24 hrs) Refresher (4 hrs)	Initial 2 years	Explosive Handler	— <sup>a</sup>
DOT Explosive Driver (public highway)	Explosive Driver license (24 hrs) Refresher (4 hrs) CDL endorsement (State license)	Initial 2 years	Explosive Handler/Explosive Driver	Every 2 years
Forklift Operator	Forklift license (40 hrs) Refresher (16 hrs)	Initial 2 years	Forklift operator	Every 2 years
Weight Handler CAT II CAT III	CAT II—Crane Center license (20 hrs) Refresher (4 hrs) CAT (III) (16 hrs) No refresher	Initial 2 years Initial	Crane Operator	Every 2 years
Respirator	Fit Test	— <sup>b</sup>	Respiratory User Certification	— <sup>b</sup>
CPR	CPR	Annual		
Firefighter	CDL endorsement (State license) Emergency Vehicle Operator license—drivers only (40 hrs) Refresher (4 hrs)	Initial 2 years	Firefighter Hazardous Waste & Emergency Responder Respiratory User Certification Fire Fighter Screening Noise Bloodborne Pathogens	— <sup>c</sup> — <sup>b</sup> Annual Annual Baseline
Police	Phase 1 & 2 training Emergency Vehicle Operator license—drivers only (24 hrs) Refresher (4 hrs)	Annual Initial 2 years	Police/Guard Security Noise Bloodborne Pathogens	— <sup>d</sup> Annual Baseline
Child Care			Childcare	Annual
Emergency Response	Explosive Driver license (24 hrs) Refresher (4 hrs) CDL endorsement (State license)	Initial 2 years	Hazardous Waste & Emergency Responder	Annual

<sup>a</sup>Explosive Driver (on activity only)—age related  
0-59—every 2 years  
60 and over—annually

<sup>b</sup>Respirator—age related after baseline  
0-34—every 5 years  
35-44—every 2 years  
45 and over—annually

<sup>c</sup>Firefighter—age related  
0-29—every 3 years  
30-44—every 2 years  
45 and over—annually

<sup>d</sup>Police—age related  
0-34—every 5 years  
35-44—every 2 years  
45 and over—annually

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**Section 2**

**RESPONSIBILITIES**

**2.1 Commander.** The Commander:

- a. Has the overall responsibility and authority for qualification and certification of personnel and delegates necessary authority to department heads.
- b. Chairman of the Explosive Safety Council.
- c. Assumes the chairmanship responsibilities of the Certification Policy Committee.
- d. Appoints Qual/Cert Board Chairpersons to execute the Qual/Cert program.
- e. Appoints Board Members.
- e. Approval authority for initial certifications.
- f. Certifying authority for individuals not performing PDs.
- g. Member of the Medical Waiver Review Board.
- h. Must authorize, in writing, all deviations by contractors from the requirements of NAVSEAINST 8020.9.

**2.2 Safety Department Head (Code 04):**

- a. Designated as the Qual/Cert Program Administrator.
- b. Member of the Explosive Safety Council/Certification Policy Committee.
- c. Responsible for the generation and maintenance of IHDIVNAVSURFWARCEN Safety Orientation for New Employees, Type I Hazard Control Briefing (HCB) and Chemical Hygiene Plan (CHP).
- d. Responsible for staffing, resources (including any record management system), equipment, and financial/budgetary levels necessary to effectively maintain the activity's Qual/Cert Program.
- e. Forward recommendations to the Certification Policy Committee concerning major Qual/Cert policy or system changes.

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**Section 7**

**SOPS AND RELATIONSHIP TO CERTIFICATION**

**7.1 Introduction.** SOPs (required for all A&E operations) are an integral component of the Qual/Cert Program. Key process SOPs are used in performing proficiency demonstrations. There is a distinct link between certification and SOPs, and the performance of A&E tasks. The certification process demonstrates the individual's ability to work in a certain certification area by meeting specific qualifications. The SOP qualification process evaluates and trains the individual on an SOP and ultimately controls the assignment of individuals to perform specific tasks in a certification area. The process supervisor is responsible for assigning only certified and SOP in-training or qualified individuals to perform A&E tasks.

The certification level (TM and TL) dictates the appropriate supervisory control and determines the level of SOP qualification that the individual can achieve, either in-training or qualified.

**7.2 SOP In-Training.** A formal, documented declaration by a Process Supervisor and TM that the employee received a HCB, understands the hazards being exposed to when performing the operations covered by the SOP, has read the SOP, and will follow the SOP under direct supervision.

**7.3 SOP Qualified.** A formal documented declaration by a Process Supervisor and TL that the employee received a HCB, understands the hazards being exposed to, read the SOP, and demonstrated the ability to perform the tasks outlined in the SOP. An employee can only be qualified to a SOP if they are at the TL certification level for that particular certification area.

**7.4 Duration of SOP Qualified and In-Training.** Valid until the SOP has undergone a revision (change number or MPC number has been revised).

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**Section 8**

**CONTRACTS**

**8.1 Introduction.** It is the responsibility of the Supply Officer (Code 11) and CORs, to ensure that all contracts covering nongovernmental personnel handling A&E contain the appropriate clauses and references as required by NAVSEAINST 8020.9.

**8.2 Contractor Clause.** The following clauses apply:

- a. Contractors Qual/Cert Program must meet the requirements of NAVSEAINST 8020.9.
- b. Contractor personnel performing A&E tasks under the scope of the contract must be covered in the contractor's or activity's Qualification Certification Program.
- c. Commander must authorize, in writing, all deviations by the contractor from NAVSEAINST 8020.9.

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**Appendix A**

**LIST OF DEFINITIONS**

**Accident/Incident** – An accident is an unexpected event that culminates in loss or serious damage (greater than 25K) to equipment and/or injury to personnel. An incident is an unexpected event that degrades safety and increases the probability of an accident.

**Administrative Supervisor** – The immediate supervisor of an employee that does not have A&E certification responsibility. This supervisor is responsible for scheduling physical, HCB Type 1, Basic of Explosive Hazards course and New Employee Orientation.

**Ammunition and Explosives (A&E)** – Any non-nuclear ordnance, ammunition, explosive, or explosive material/item/device/hazardous waste classed or being developed to be classed as a United Nations Organization Class 1, Divisions 1 through 6 item.

**Basic Magazine Operations Course** – Required training course for Magazine Area certification. Mandated by IHDIVNAVSURFWARCENINST 1163.1. Course covers magazine operations and custodial responsibilities.

**Certification** – A formal, documented declaration by a Qual/Cert Board Chairperson that an individual has met all of the qualifications to be certified:

- a. Valid for one year and will expire on the last day of the month granted (e.g., granted on 2 June 2001, expires 30 June 2002).
- b. Anniversary Date for Certification – Date (end of month) explosive handler physical examination results entered into PCS. For those areas when the explosive handler physical is not required, the anniversary date (month) will be when the Type 1 HCB was received.
- c. Documented in PCS.

**Certification Area (CA)** – The ability of the TM or TL to work in a particular area.

**Certification Extension** – Extension of certification because medical qualification cannot be met in a timely fashion. The Qual/Cert Chairperson can grant extensions for up to 90 days if any of the following conditions exist:

- a. Difficulty in scheduling medical exam
- b. Results of medical exam pending
- c. Private physician and occupational health physician discussions on going
- d. Medical Waiver Approval in process.

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**Certification Level** – Certification level assigned by the Certification Board based on qualifications. The assigned level defines supervisory control requirements for individuals. Certification levels shall be:

- a. Team Member (TM) – Personnel certified to handle A&E only under the direct supervision of a TL.
- b. Team Leader (TL) – Personnel certified to handle A&E without direct supervision, and may provide direction to others.

**Certification Policy Committee** – The Explosive Safety Council as outlined in Chapter 33 of IHDIVNAVSURFWARCENINST 5100.22.

**Certification Re-instatement Plan** – A document generated by the immediate supervisor of the employee who has had their certification revoked and approved by the Qual/Cert Board Chairperson that outlines the requirements needed for re-obtaining certification. The plan as a minimum must contain the following:

- a. Requirements in addition to first time certification qualifications.
- b. The specific training that will be given that will address the specific cause of revocation.

**Certification Supervisor** – The immediate supervisor that has A&E certification responsibility for an individual. The permanent certification supervisor is the employee's permanently assigned supervisor or "supervisor of record".

**(IHDIVNAVSURFWARCEN) Chemical Hygiene Plan** – A plan conforming to 29 CFR 1910.1450 required for research and analytical chemical laboratories to provide guidance and direction for controlling toxic hazards. Reviewing and understanding the plan is a qualification requirement for chemical laboratory personnel.

**Direct Supervision** – The TL individual that is assigned to oversee the TM individual who must be at all times, close enough to see and hear what the TM employee is doing and must be able to detect if the employee makes a mistake or is performing the job in an unsafe manner.

**Disqualifying medical condition** – A medical or physical condition that prevents an individual from meeting medical qualifications needed for certification.

**Duration of SOP Qualified and In-Training Signatures** – Valid until the SOP has undergone a revision (change number or MPC number has been revised).

**Experience in A&E** – Duration of time (1 year minimum) that an individual has in the field of A&E or successful completion of Basics of Naval Explosive Hazard Control. This is a required qualification requirement for Unescorted Official for TL level certification.

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**Explosive Handlers Physical** – A physical examination that is necessary for anyone that needs to be in-training or qualified to an activity SOP or source document to perform hands-on A&E work on or off site. Individuals who do not need to be qualified to SOPs are not required to have this physical.

**Explosive Mishap** – An accident or incident involving conventional ordnance, ammunition, explosives, explosive systems, and devices resulting in an unintentional detonation, firing, deflagration, burning, launching of ordnance material (including all ordnance impacting off-range), leaking or spilled propellant fuels and oxidizers (less Otto Fuel II), or chemical agent release.

**Firing Officer** – An individual, appointed in writing by the Qual/Cert Board Chairperson and line management, assigned the responsibility to oversee any ground or static firing test requiring the initiation of energetic materials generated from unique work. Certification of individuals to firing officer accomplishes the “appointed” requirement as long as line management has signed the certification record or was designated as board member in the nomination of the individual for certification.

**First Time Certification** – The first time that an individual is TM certified or TL certified to a particular certification area.

**Handling A&E** – When an individual is performing a task or non task function on A&E which results in physical contact with A&E.

**Enrollment in Hazard Base Medical Surveillance** – When an individual has received a medical exam that establishes the baseline evaluation for a particular work place hazard. An individual should not be exposed to this hazard until the baseline physical is completed. The most common hazards that might require medical surveillance are:

Lead	Heat
Bloodborne Pathogens	Asbestos
Mix solvents	Acids/Alkali
Silica	Chromium
Laser radiation	Cadmium
NG	Otto Fuel
Toluene	Isocyanates
Ionizing radiation	

Hazard base medical is required for SOP qualifications, not for certification.

**(Activity Type I) Hazard Control Briefing (HCB I)** – A Safety-controlled document that addresses the activity's A&E processes and describes the hazards and control methods that the worker may encounter. This is a qualification requirement for first-time TM certification.



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**(Type II) Hazard Control Briefing (HCB II)** – A section of the SOP developed in accordance with IHDIVNAVSURFWARCENINST 8023.4 that describes the hazards and control methods that the worker will encounter. This briefing is required:

- a. Prior to the start of a new operation
- b. Monthly for ongoing operations
- c. When the operation has changed (SOP change) that exposes the worker to different hazards or control methods.

**Immediate Supervisor** – An individual who has the management responsibility for employees (e.g., work assignments, everyday direction, and guidance).

**Initial Certification** – The Commanding Officer certification of the first TL certified individual and an approved board member in a certification area.

**Job Specific Qualification Requirements** – The training, licensing and Hazard Base Medical Examinations that are needed to perform any specific A&E task.

**Key Process SOPs** – An SOP that covers operations that are primary or core process in a certification area and used in evaluating an individual's performance during a proficiency demonstration.

**Medical Waiver** – The decision of the Medical Waiver Review Board that allows an individual having a disqualifying medical condition to be certified to conduct A&E operations. This decision is documented and becomes part of the individual's certification record.

**Medical Waiver Review Board (MWRB)** – Comprised of the IHDIVNAVSURFWARCEN Commander, occupational health physician, Code 042, as the Qual/Cert Board Chairperson and the immediate supervisor. This board decides whether a person having a disqualifying medical condition can conduct A&E operations and be certified.

**Mishap Investigation Support Team (MIST)** – Personnel in the CAD/PAD Department, Code 50, who are specially trained to investigate airplane mishaps.

**Minor Procedure Change (MPC)** – A method of instituting a minor change to an SOP so the operation can continue with a valid SOP with the least delay.

**New Employee Orientation** – Mandatory training given to new employees (to IHDIVNAVSURFWARCEN) as a qualification requirement for TM first-time certification.

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**Non Task Function** – Action taken requiring an individual to have physical contact with A&E but doesn't require the use of SOP or other source document. For example, moving/lifting an A&E to do a visual inspection as part of an inspection or investigation or touching A&E during plant visits of management officials.

**OP 5 Basic Safety Training** – Mandatory training and a qualification requirement for the first time TM certification. Training must be completed within 30 days of obtaining TM certification. One of the following courses will be acceptable:

- a. Basics of Naval Explosives Hazard Control (AMMO-C-21)
- b. Laboratory Explosives Safety Course (AMMO-C-26) for laboratory personnel
- c. Explosives Safety for Officers/Managers/Supervisors (AMMO-C-25)

**Personnel Certification System** – An electronic media used to maintain Qual/Cert and other training records.

**Physical Contact** – The action of an individual to handle A&E by moving containerized or non-containerized A&E item(s), by hand or using OHE/MHE or to transport by vehicle.

**Process Supervisor** – A TL certified individual who has been assigned the responsibility to assure A&E operations are conducted in accordance with the SOP and safety, environmental, and other regulations. Should be assigned as certification board members whenever possible.

**Professional Personnel** – From OP 5 Appendix G, any individual with either of the following is considered a professional:

- a. At least 1 year experience in their field of expertise and a 4-year college degree in a discipline relevant to work
- b. At least 5 years of experience in their field of expertise and recognized as having leadership or supervisory responsibility for this kind of work.

**Proficiency Demonstration (PD)** – The safe and effective performance by an individual seeking certification/recertification of a task using approved operating documentation specifically designed for the purpose of evaluating performance and witnessed and documented by a Qual/Cert Board Member in the area in which the task is being performed.

There are two types of proficiency demonstrations:

- a. Observed PD – Visual observation by the board member of the individual performing the task using a key process SOP.
- b. Verified PD – Verification by a board member that the employee has performed work within the CA during the previous year.

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PDs are:

- a. Done at the TM level to evaluate the individual's
  - (1) understanding of basic explosive rules and regulations
  - (2) ability to read and understand the operational documentation
  - (3) ability to take verbal directions in the performance of tasks involving A&E.
- b. Done at the TL to evaluate the individual's ability to safely perform A&E operations independently.
- c. Required for first-time TM certifications, should not use live A&E if possible.
- d. Required for first-time TM and TL certifications by performing observed PDs.
- e. Required for all other certifications using verified PDs.
- f. Formally documented and maintained as an official record.

**Proficiency Demonstration Waiver** – A process by which an individual can be TL certified by the Commander without performing a PD. (Situation exists that makes it impractical to perform the PD.)

**Qual/Cert Board (QCB)** – A Command appointed Board that consists of a least two people; a chairperson who is the certifying authority for personnel performing A&E operations and a board member who has observed or verified the PD.

**Qual/Cert Board Chairperson** – A Command-appointed person who grants TM and TL certifications.

**Qual/Cert Board Member** – A Command-appointed individual who evaluates and formally documents the observed or verified PD of the individual nominated for certification. The board member must be TL certified and from the organization (cognizant over SOP) in which the task is being performed.

**Qual/Cert Program** – Establishes qualifications to ensure safe handling of ammunition and explosives (A&E) by personnel and grants permission in the form of a certification of individuals who have attained their qualifications.

**Qual/Cert Program Administrator** – The Safety Department Head, Code 04 is responsible for the overall administration of the Qualification/Certification Program.

**Qual/Cert System Coordinator** – Component of the Safety Department that is assigned administrative support of the qualification/certification program and PCS.

**Qual/Cert Coordinator** – Individual in departments who provides administrative support to the Qual/Cert process and QCB.

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Table 6-1. Training and Hazard Based Medical Qualifications

Job	Job-specific training	Training frequency	Hazard base Medical	Medical frequency
Explosive Driver (on activity only)	Explosive Driver license (24 hrs) Refresher (4 hrs)	Initial 2 years	Explosive Handler	— <sup>a</sup>
DOT Explosive Driver (public highway)	Explosive Driver license (24 hrs) Refresher (4 hrs) CDL endorsement (State license)	Initial 2 years	Explosive Handler/Explosive Driver	Every 2 years
Forklift Operator	Forklift license (40 hrs) Refresher (16 hrs)	Initial 2 years	Forklift operator	Every 2 years
Weight Handler CAT II CAT III	CAT II—Crane Center license (20 hrs) Refresher (4 hrs) CAT (III) (16 hrs) No refresher	Initial 2 years Initial	Crane Operator	Every 2 years
Respirator	Fit Test	— <sup>b</sup>	Respiratory User Certification	— <sup>b</sup>
CPR	CPR	Annual		
Firefighter	CDL endorsement (State license) Emergency Vehicle Operator license—drivers only (40 hrs) Refresher (4 hrs)	Initial 2 years	Firefighter Hazardous Waste & Emergency Responder Respiratory User Certification Fire Fighter Screening Noise Bloodborne Pathogens	— <sup>c</sup> — <sup>b</sup> Annual Annual Baseline
Police	Phase 1 & 2 training Emergency Vehicle Operator license—drivers only (24 hrs) Refresher (4 hrs)	Annual Initial 2 years	Police/Guard Security Noise Bloodborne Pathogens	— <sup>d</sup> Annual Baseline
Child Care			Childcare	Annual
Emergency Response	Explosive Driver license (24 hrs) Refresher (4 hrs) CDL endorsement (State license)	Initial 2 years	Hazardous Waste & Emergency Responder	Annual

<sup>a</sup>Explosive Driver (on activity only)—age related  
0-59—every 2 years  
60 and over—annually

<sup>b</sup>Respirator—age related after baseline  
0-34—every 5 years  
35-44—every 2 years  
45 and over—annually

<sup>c</sup>Firefighter—age related  
0-29—every 3 years  
30-44—every 2 years  
45 and over—annually

<sup>d</sup>Police—age related  
0-34—every 5 years  
35-44—every 2 years  
45 and over—annually

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**Standard Qualification Requirement** – Those qualifications required for certification in all areas unless stated otherwise (specific qualifications).

**Suspension of Certification** – Is the temporary loss of certification status mandated by the Qual/Cert Board Chairperson, of an individual for:

- a. Expiration of qualification or certification.
- b. Being involved in an explosive mishap.

Individuals will obtain certification after qualifications are met or mishap investigation determines mishap was not the result of any one of the criteria that mandate the revocation of certification.

**Task** – A job/process/evolution or series thereof using SOPs or other source document requiring an individual to physically interface or to operate equipment/vehicles that physically interface with A&E.

**Team Leader (TL)** – Personnel certified to handle A&E without direct supervision, and may provide direction to others

**Team Member (TM)** – Personnel who are certified to handle A&E only under the direct supervision of a Team Leader (TL) individual.

**TM Certification Extension** – A request submitted to the Qual/Cert Board Chairperson by an employee's immediate supervisor for an extension to the STEP 2 (30-day) TM certification window to allow more time to meet TM qualifications.

**Unescorted Official** – Engineers and other professionals, line management, safety inspectors and other individuals who handle A&E. Their physical contact is limited, not considered a task and does not require SOP qualification.

**Unique Work** – As defined by OP 5 Appendix G (G-3.4.1):

- a. Tasks that are performed once.
- b. The limited repetition of a task until it has been successfully completed once.
- c. Work that has never been done before.
- d. Work with unknown/undocumented material.

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**CERTIFICATION FORM**

DATE: 12-JUN-2002  
CERTIFICATION FORM

Employee name: TEST, EMPLOYEE

Area Code	Operation	Cert Level	Employee Signature and Date	Board Member Signature and Date	Admin Supv Signature and Date	Board Chair Signature and Date												
01	AME Manufacturing & Development	TL																
02	AME Test and Evaluation	TL																
03	Unescorted Official	TL																
Does this individual have more than 1 year experience with AME																		
<input type="checkbox"/> Yes <input type="checkbox"/> No																		
04	Equipment Maintenance	TL																
05	AME Magazine Operation	TL																
06	Firing Officer	TL																
07	Engineering Investigation	TL																
Does this individual have																		
<table border="0"> <tr> <td>Yes</td> <td>No</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>1 year experience in AME and a 4-year college degree</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>5 year experience in field of expertise and has leadership or supervisor responsibility</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>MIST (training required)</td> </tr> </table>							Yes	No		<input type="checkbox"/>	<input type="checkbox"/>	1 year experience in AME and a 4-year college degree	<input type="checkbox"/>	<input type="checkbox"/>	5 year experience in field of expertise and has leadership or supervisor responsibility	<input type="checkbox"/>	<input type="checkbox"/>	MIST (training required)
Yes	No																	
<input type="checkbox"/>	<input type="checkbox"/>	1 year experience in AME and a 4-year college degree																
<input type="checkbox"/>	<input type="checkbox"/>	5 year experience in field of expertise and has leadership or supervisor responsibility																
<input type="checkbox"/>	<input type="checkbox"/>	MIST (training required)																
08	TM - 30 DAY	TM																
09	TM	TM																

Enclosure (1)

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MEMORANDUM

From: Board Chairperson  
To: Commander

Subj: INITIAL TL CERTIFICATION AND PD WAIVER

Ref: (a) IHDIVNAVSURFWARCENINST 8020.5

1. Initial TL certification, Proficiency Demonstration waiver and Board Member establishment is requested for:

<Name>  
<SSN>  
<Code>  
<Supervisor Name & Code>  
<Certification Area>  
<Knowledge/Expertise supporting certification>

BOARD CHAIRPERSON

Approved                      Disapproved

MARC A. SIEDBAND                      Date

Enclosure (2)

**Enclosure 75**  
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MEMORANDUM

From: Supervisor  
To: Board Chairperson

Subj: TM CERTIFICATION 30-DAY EXTENSION

Ref: (a) IHDIVNAVSURFWARCENINST 8020.5

1. Request a 30 day extension of TM certification for <individual>. TM certification requirements that have been met are:

**<list those that have been completed>**

Basic of Naval Explosive Hazard - <date>  
Type 1 HCB - <date>  
New Employee Orientation - <date>  
Proficiency Demonstration - <date>

**<list those that have not been completed>**

2. <justification for 30 day extension and expected completion date>.

BOARD CHAIRPERSON

Copy to:  
PCS file

Enclosure (3)



**Enclosure 75**  
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**PROFICIENCY DEMONSTRATION FOR EXPLOSIVES CERTIFICATION**

Name:

Employee Code:

SSN:

**TM PROFICIENCY DEMONSTRATION**

DATE:	SKILL LEVEL: TM  <input type="checkbox"/> First Time <input type="checkbox"/> Recertification	SOP #		OBSERVED <input type="checkbox"/> VERIFIED <input type="checkbox"/> <small>(worked in certification area in last 12 months to maintain skill level to maintain certification)</small>
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SOP Title:

Board Member Name:

Board Member Signature:

**TL PROFICIENCY DEMONSTRATION**

DATE:	SKILL LEVEL: TL  <input type="checkbox"/> First Time <input type="checkbox"/> Recertification <input type="checkbox"/> Reinstatement of Certification	SOP #	CERTIFICATION AREA <input type="checkbox"/> A & E Manufacturing & Development <input type="checkbox"/> A & E Test & Evaluation <input type="checkbox"/> A & E Magazine Operation <input type="checkbox"/> Equipment Maintenance <input type="checkbox"/> Firing Officer	OBSERVED <input type="checkbox"/> VERIFIED <input type="checkbox"/> <small>(worked in certification area in last 12 months to maintain skill level to maintain certification)</small>
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SOP Title:

Board Member Name:

Board Member Signature:

DATE:	SKILL LEVEL: TL  <input type="checkbox"/> First Time <input type="checkbox"/> Recertification <input type="checkbox"/> Reinstatement of Certification	SOP #	CERTIFICATION AREA <input type="checkbox"/> A & E Manufacturing & Development <input type="checkbox"/> A & E Test & Evaluation <input type="checkbox"/> A & E Magazine Operation <input type="checkbox"/> Equipment Maintenance <input type="checkbox"/> Firing Officer	OBSERVED <input type="checkbox"/> VERIFIED <input type="checkbox"/> <small>(worked in certification area in last 12 months to maintain skill level to maintain certification)</small>
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SOP Title:

Board Member Name:

Board Member Signature:

DATE:	SKILL LEVEL: TL  <input type="checkbox"/> First Time <input type="checkbox"/> Recertification <input type="checkbox"/> Reinstatement of Certification	SOP #	CERTIFICATION AREA <input type="checkbox"/> A & E Manufacturing & Development <input type="checkbox"/> A & E Test & Evaluation <input type="checkbox"/> A & E Magazine Operation <input type="checkbox"/> Equipment Maintenance <input type="checkbox"/> Firing Officer	OBSERVED <input type="checkbox"/> VERIFIED <input type="checkbox"/> <small>(worked in certification area in last 12 months to maintain skill level to maintain certification)</small>
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SOP Title:

Board Member Name:

Board Member Signature:

Enclosure (4)

**Enclosure 75**  
**INDIVNAVSURFWARCENINST.80205 Qualification/Certification**

I

IHDIVNAVSURFWARCENINST 8020.5

0 5 8110 2009

MEMORANDUM

From: Board Chairperson  
To: <off-site location>

Subj: CERTIFICATION FOR <employee>

Ref: (a) IHDIVNAVSURFWARCENINST 8020.5

1. <Employee> is certified to perform and to instruct others for <task> which we considered the task being performed at your activity. <Employee> is certified to the <level of certification> and certification expires <date of expiration>.
2. <Employee> has received respiratory training and is qualified to wear the <respirator type>. <Employee> is medically qualified to perform explosive operations but is restricted <list any medical restrictions>.

BOARD CHAIRPERSON

Copy to:  
<employee>

Enclosure (5)

**Enclosure 75**  
**INDIVNAVSURFWARCENINST.80205 Qualification/Certification**

I

IHDIVNAVSURFWARCENINST 8020.5

05 Aug 2002

MEMORANDUM

From: Board Chairperson  
To: <Supervisor>

Subj: CERTIFICATION EXTENSION FOR <employee>

1<Employee> explosive handlers physical is due on <expiration date>. A certification extension has been approved for 90 days. Certification date has been changed to reflect the additional 90 days.

BOARD CHAIRPERSON

Enclosure (6)

**Enclosure 75**  
**INDIVNAVSURFWARCENINST.80205 Qualification/Certification**

IHDIVNAVSURFWARCENINST 8020.5

0 5 AUG 2007

MEMORANDUM

From: Board Chairperson

To: Medical Waiver Review Board (Code 042)

Subj: WAIVER OF DISQUALIFYING MEDICAL CONDITION ICO (Name/Identifier of Employee)

Ref: (a) IHDIVNAVSURFWARCENINST 5100.22F CH-2  
(b) Medical Surveillance Procedures Manual and Medical Matrix  
(c) OPNAVINST 5100.23D  
(d) NAVMED P-117 (MANMED)

1. Reference (a) requires all employees involved with explosive handling to be enrolled in a medical surveillance program. In accordance with references (b), (c) and (d), (employee) was found disqualified for certification as an Explosive Handler & Vehicle Operator (720) per a physical examination performed on (date) due to (disqualifying condition).
2. A waiver is requested for this condition based upon (justify why you believe a waiver will not compromise the safety or health of the individual. This paragraph should also include a statement that the work site has been evaluated for any problems which might affect safety. For color vision deficient individuals, document that the worker can properly identify color coded warning or hazard signals. Also document that any changes in such signaling devices will include a reevaluation of the worker.)
3. This waiver shall remain in effect (note duration of waiver, options can include normal certification internals or more frequent evaluations, depending on the condition waived.) This waiver will no longer be valid if the worker changes this job position or assignment, or if the condition worsens (if needed, specify a limit for the variation, this is typically recommended by the Occupational Medical physician).
4. The Medical Waiver Review Board understands that the employee must continue to comply with all qualification and certification procedures as if no disqualifying condition existed.
5. Request that a waiver for the disqualifying medical condition be granted for (employee) based on review of his/her capability to safely and proficiently perform the specific job tasks outlined above.

BOARD CHAIRPERSON

Enclosure (7)

**Enclosure 75**  
**INDIVNAVSURFWARCENINST.80205 Qualification/Certification**

1

IHDIVNAVSURFWARCENINST 8020.5

05 AUG 2002

\_\_\_\_\_  
(Concur/Not Concur) that employee's medical condition(s) is of no risk for harm to self or co-workers and can be waived.

\_\_\_\_\_  
NORMAN J. MOORE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
For specific job tasks and responsibilities outlined above, I concur/Not concur that the disqualifying medical condition(s) can be waived for employee mentioned.

\_\_\_\_\_  
ROBERT J. BURKE, MD, MPH, FAAFP, 9916  
CDR, MC, USN

\_\_\_\_\_  
DATE

\_\_\_\_\_  
Waiver Granted/Waiver Not Granted

\_\_\_\_\_  
MARC A. SIEDBAND  
Captain, U.S. Navy  
Commander

\_\_\_\_\_  
DATE

Copy to:  
Employee  
042A3  
MED-2

Enclosure (7)

2

## Enclosure 76 – Bulletins for DoD 4160.21-M.

**DoD DEMIL**



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**Bulletin: 99-005**

**Revised Disposal Policy Guidance for Ammunition, Explosives, and Dangerous Articles (AEDA)  
3/30/1999**

ROUTINE  
R 011854Z APR 99

FM PTC EMAIL SYSTEM WASH DC

INFO DA EMAIL CUSTOMER//DLATCC//  
R 301705Z MAR 99

FM DLA FT BELVOIR VA//DLSC-LC//

TO DA WASHINGTON DC//DALO-SMP//  
COMNAVSUPSYSCOM MECHANICSBURG PA//21243A//  
CMC WASHINGTON DC//LPP2//  
HQ USAF WASHINGTON DC//LGSP//  
COMDT COGARD WASHINGTON DC//G-CFM3//  
HQ AFMC WRIGHT PATTERSON AFB OH//LGIA//  
CORAMC ALEXANDRIA VA//LG-MS//  
DRMS BATTLE CREEK MI//D/TSD//  
CDRIOC ROCK ISLAND IL//AMSIO-SMK-V//  
DLIS BATTLE CREEK MI//SBD//

INFO SECDEF WASHINGTON DC//DUSD//MDM//  
COMDT USALMC FT LEE VA//ASTZ-LSN-R//  
DLA FT BELVOIR VA//DCIA/DLSC/DLSC-LE/DLSC-LC//  
DCMC FT BELVOIR VA//OE//  
DCPSOCOLUMBUSOH //PROSSER//

UNCLAS

SUBJECT: DEMILITARIZATION (DEMIL) PROGRAM MANAGEMENT BULLETIN 99-005,  
REVISED DISPOSAL POLICY GUIDANCE FOR AMMUNITION, EXPLOSIVES, AND DANGEROUS  
ARTICLES (AEDA)

A. DOD 4160.21-M, DEFENSE MATERIEL DISPOSITION MANUAL, CHAPTER 4, PARAGRAPH  
B3

B. DOD 4160.21-M-1, DEFENSE DEMILITARIZATION MANUAL, CHAPTER II

1. THE DOD DEMILITARIZATION PROGRAM OFFICE IN COORDINATION WITH THE DOD  
DISPOSAL POLICY WORKING GROUP HAS REVISED DISPOSAL GUIDANCE FOR AEDA/RANGE  
RESIDUE.

2. THIS POLICY MAY BE VIEWED ON THE DOD DEMILITARIZATION AND TRADE SECURITY  
CONTROLS WEB SITE AT [HTTP://WWW.ALMC.ARMY.MIL/DEMIL](http://www.almc.army.mil/DEMIL).

3. THIS GUIDANCE IS EFFECTIVE IMMEDIATELY AND WILL BE INCORPORATED INTO  
ABOVE REFERENCES WITH THE NEXT FORMAL CHANGE/REWRITE, EXPECTED TO BE  
PUBLISHED THIRD QUARTER FY99.

4. RETRANSMISSION OF THIS MESSAGE IS AUTHORIZED AND WIDEST DISSEMINATION IS  
STRONGLY ENCOURAGED. POC FOR THIS MESSAGE IS MR. JACK W. BLACKWAY, DOD  
DEMIL PM, DLSC-LC, DSN 427-1539/1542/1528.

LES MOORING/DLSC-LC/767-1528/23 MAR 99  
DISK: DISKETTE DOC: 99005  
FILE: 610.30 CON/SUS: N/A

BT  
NNNN  
01 DA WASH DC 0

ACTION DALO(\*) (U,F)

INFO SCB REVIEW(\*) AOC-AHS(\*)

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**Bulletin: 00-001**  
**AEDA Certification Requirements**  
**12/3/1999**

Subject: Fw: [6R00585988U.CGS] DEMILITARIZATION (DEMIL) PROGRAM  
MANAGEMENT BULLETIN  
RAAUZFDY RUEADLA8150 3352015-UUUU--REATCC.  
ZNR UUUUU

R 032223Z DEC 99  
FM PTC EMAIL SYSTEM WASH DC  
INFO REATCC/DA EMAIL CUSTOMER//DLATCC//  
R 011949Z DEC 99 ZFD  
FM DLSC FT BELVOIR VA//DLSC-L//  
TO RUEADWD/DA WASHINGTON DC//DALO-SMP//  
RULSAMX/COMNAVSUPSYSCOM MECHANICSBURG PA//21243A//  
RUEACMC/CMC WASHINGTON DC//LPP2//  
RUEAHQA/HQ USAF WASHINGTON DC//LGSP//  
RULS3GA/COMDT COGARD WASHINGTON DC//G-CFM3//  
RUVALAN/HQ AFMC WRIGHT PATTERSON AFB OH//LGIA//  
RUEAAMC/CDRAMC ALEXANDRIA VA//LG-MS//  
RUEOUAB/DRMS BATTLE CREEK MI//TSD//  
RUERNIB/CDRIOC ROCK ISLAND IL//AMSIO-MAS-D//  
RUEOUAA/DLIS BATTLE CREEK MI//SBD//  
INFO RUEKJCS/SECDEF WASHINGTON DC//ADUSD/SCI//  
RUERLEX/COMDT USALMC FT LEE VA//ASTZ-LSN-R//  
RUEADLA/DLA FT BELVOIR VA//DCIA/DLSC-LE/DLSC-LC//  
RUEADLA/DCMC FT BELVOIR VA//OE//  
RUDIDLK/DCPSOCOLUMBUSOH //PROSSER//  
BT

UNCLAS  
SUBJECT: DEMILITARIZATION (DEMIL) PROGRAM MANAGEMENT BULLETIN  
PAGE 02 RUEADLA8150 UNCLAS  
00-001, AEDA CERTIFICATION REQUIREMENTS  
A. REFERENCE MSG R 011854Z, DEMILITARIZATION (DEMIL) PROGRAM  
MANAGEMENT BULLETIN 99-005, REVISED DISPOSAL POLICY GUIDANCE FOR  
AMMUNITION, EXPLOSIVES, AND DANGEROUS ARTICLES (AEDA).  
1. REFERENCE ANNOUNCED CHANGE OF DOD AEDA POLICY, PROVIDED WEB  
ADDRESS TO VIEW POLICY PRIOR TO PUBLICATION OF DOD 4160.21-M,  
DEFENSE MATERIEL DISPOSITION MANUAL, AND MADE THIS NEW POLICY  
EFFECTIVE IMMEDIATELY.  
2. SUBPARAGRAPH 3.G. OF NEW POLICY IS AMENDED AS FOLLOWS:  
A. FIRST SENTENCE, AFTER "CONTAINERS" ADD "FOR OR HAVING".  
B. AT END OF SUBPARAGRAPH 3.G. ADD NEW SENTENCE TO READ "CONTAINERS  
OF THIS TYPE GENERATED FROM DEPOT STOCKS AND/OR IN ORIGINAL AND  
UNDAMAGED FACTORY PACKAGING, CONTRACTOR PACKAGING OR PRESERVATION  
PACKAGING ARE EXEMPT FROM CERTIFICATION REQUIREMENTS."  
3. THIS GUIDANCE IS EFFECTIVE IMMEDIATELY AND WILL BE INCORPORATED  
INTO THE NEXT REWRITE OF DOD 4160.21-M, EXPECTED TO BE PUBLISHED  
FIRST QUARTER FY00.  
4. RETRANSMISSION OF THIS MESSAGE IS AUTHORIZED AND WIDEST  
DISSEMINATION IS STRONGLY ENCOURAGED. POC FOR THIS MESSAGE IS MR.  
JACK W. BLACKWAY, DOD DEMIL PM, DLSC-LCM, DSN 427-1539/1542/1528.

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#### Bulletin: 99-007 Demil Certification Requirements 5/26/1999

FM PTC EMAIL SYSTEM WASH DC

INFO DA EMAIL CUSTOMER//DLATCC//  
R 261508Z MAY 99

FM DLA FT BELVOIR VA//DLSC-LC//

TO DA WASHINGTON DC//DALO-SMP//  
COMNAVSUPSYSCOM MECHANICSBURG PA//21243A//  
CMC WASHINGTON DC//LPP2//  
HQ USAF WASHINGTON DC//LGSP//  
COMDT COGARD WASHINGTON DC//G-CFM3//  
HQ AFMC WRIGHT PATTERSON AFB OH//LGIA//  
CDRAMC ALEXANDRIA VA//LG-MS//  
DRMS BATTLE CREEK MI//TSD//  
CDRIOC ROCK ISLAND IL//AMSIO-SMK-M//  
DLIS BATTLE CREEK MI//SBD//

INFO SECDEF WASHINGTON DC//DUSD/LMDM//  
COMDT USALMC FT LEE VA//ASTZ-LSN-R//  
DLA FT BELVOIR VA//DCIA/DLSC-LE/DLSC-LC//  
DCMC FT BELVOIR VA//OE//  
DCPSOCOLUMBUSOH //PROSSER//

UNCLAS

SUBJECT: DEMILITARIZATION (DEMIL) PROGRAM MANAGEMENT BULLETIN 99-007, DEMIL CERTIFICATION REQUIREMENTS

A. DOD 4160.21-M-1, DEFENSE DEMILITARIZATION MANUAL, CHAPTER II, PARAGRAPH A7.

1. CIRCUMSTANCES HAVE NECESSITATED CLARIFICATION TO THE DEMIL CERTIFICATION REQUIREMENT. THIS MESSAGE DETAILS THOSE CLARIFICATIONS.

2. A CERTIFICATION AS QUOTED BELOW WILL BE SIGNED AND DATED BY A TECHNICALLY QUALIFIED GOVERNMENT REPRESENTATIVE, AS DESIGNATED BY THE RESPONSIBLE COMMANDER OR AGENCY CHIEF, WHO ACTUALLY WITNESSED THE DEMILITARIZATION OF THE MATERIAL WHETHER PERFORMED BY GOVERNMENT OR CONTRACTOR PERSONNEL. IN CASES WHERE THE WITNESSING OF DEMILITARIZATION WOULD UNNECESSARILY SUBJECT THE WITNESS TO HAZARDOUS CONDITIONS OR WHEN THE DEMILITARIZED MATERIAL CAN BE LAID OUT TO CLEARLY DISPLAY THE RESIDUE FROM EACH ITEM DEMILITARIZED, DEMILITARIZATION MAY BE CERTIFIED THROUGH INSPECTION OF THE RESIDUE. THE CERTIFICATE WILL BE EXECUTED FOR ALL ITEMS DEMILITARIZED AND WILL READ AS FOLLOWS:

"I CERTIFY THAT (IDENTIFY ITEMS) WERE DEMILITARIZED IN ACCORDANCE WITH (CITE SPECIFIC APPENDIX, CATEGORY, AND PARAGRAPH THAT WERE COMPLIED WITH IN THE DOD 4160.21-M-1 AND OTHER APPLICABLE REGULATION)."

3. THE CERTIFICATE MUST BE COUNTERSIGNED AND DATED BY A TECHNICALLY QUALIFIED U.S. GOVERNMENT REPRESENTATIVE (UNITED STATES CITIZEN), DESIGNATED BY THE RESPONSIBLE COMMANDER, WHO ACTUALLY WITNESSED THE DEMILITARIZATION OF THE MATERIAL OR INSPECTED THE RESIDUE AS PROVIDED ABOVE. THE INDIVIDUAL WHO COUNTERSIGNS WILL BE AT LEAST IN THE NEXT HIGHER MANAGEMENT LEVEL TO THE INITIAL CERTIFYING INDIVIDUAL.

4. THE CERTIFICATION WILL INCLUDE THE PRINTED OR TYPED NAME OF THE SIGNATORIES.

5. IN THE CASE OF MAP, GRANT AID PROPERTY AND FMS PROPERTY, A QUALIFIED MEMBER OF THE OFFICE OF DEFENSE COOPERATION OR THE DEFENSE ATTACHE OFFICE MAY COUNTERSIGN TO THE COMPLETED DEMILITARIZATION.

6. IN THE CASE OF EXCESS/SURPLUS CONTRACTOR INVENTORY OR WHERE A DRMS OR MILITARY SERVICE CONTRACTOR IS PERFORMING DEMIL, TRAINED CONTRACTOR



## **Enclosure 76 – Bulletins for DoD 4160.21-M.**



PERSONNEL MAY ACCOMPLISH CERTIFICATION ONLY. (IT IS NO LONGER NECESSARY TO OBTAIN A WAIVER FOR CONTRACTOR CERTIFICATION FROM THE DOD DEMIL PROGRAM OFFICE.) VERIFICATION (COUNTERSIGNATURE) MUST BE ACCOMPLISHED BY A TECHNICALLY QUALIFIED U.S. GOVERNMENT REPRESENTATIVE (UNITED STATES CITIZEN).

7. THE DRMO CHIEF, PROPERTY ADMINISTRATOR, OR GENERATING ACTIVITY ACCOUNTABLE PROPERTY OFFICER, AS APPROPRIATE, WILL PLACE THE DEMILITARIZATION CERTIFICATE IN THE APPLICABLE SOURCE DOCUMENT FILE IN ACCORDANCE WITH AGENCY RECORDS RETENTION TIME FRAMES. THE ACO/ PLCO WILL ENSURE THAT A COPY OF THE CERTIFICATE IS PLACED IN THE APPROPRIATE CONTRACT ADMINISTRATION FILE AND RETAINED IN ACCORDANCE WITH AGENCY RECORDS RETENTION TIME FRAMES. DEMILITARIZATION CERTIFICATES FOR DEMILITARIZATION OF ALL SMALL ARM WEAPON/RECEIVERS WILL BE RETAINED INDEFINITELY IN A PERMANENT RECORD FILED BY THE DOD ACTIVITY RESPONSIBLE FOR THE DEMILITARIZATION OF THE SMALL ARMS WEAPONS AND RECEIVERS.

8. WARNING: SIGNING A FALSE CERTIFICATE CONSTITUTES A FELONY AND MAY SUBJECT THE INDIVIDUAL TO CRIMINAL PROSECUTION.

9. THIS GUIDANCE IS EFFECTIVE IMMEDIATELY AND WILL BE INCORPORATED INTO REFERENCE A WITH THE NEXT FORMAL CHANGE/REWRITE, EXPECTED TO BE PUBLISHED FOURTH QUARTER FY99.

10. RETRANSMISSION OF THIS MESSAGE IS AUTHORIZED AND WIDEST DISSEMINATION IS STRONGLY ENCOURAGED. POC FOR THIS MESSAGE IS MR. JACK W. BLACKWAY, DOD DEMIL PM, DLSC-LC, DSN 427-1539/1542/1528.

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Last Updated Monday, 19-Aug-2002 16:03

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**Bulletin: 99-004**  
**DoD Demilitarization Training**  
**1/26/1999**

R 261755Z JAN 99

FM DLA FT BELVOIR VA//DLSC-L//

TO DA WASHINGTON DC//DAIO-SMP//  
COMNAVSUPSYSCOM MECHANICSBURG PA//  
CMC WASHINGTON DC//LPP2//  
HQ USAF WASHINGTON DC//LGSP//  
COMDT COGARD WASHINGTON DC//G-CFM3//  
HQ AFMC WRIGHT PATTERSON AFB OH//LGID2//  
CDRAMC ALEXANDRIA VA//LG/-MS//  
DRMS BATTLE CREEK MI//SBD//  
CDRIOC ROCK ISLAND IL//AMSIO-SMK-M//  
DLIS BATTLE CREEK MI//SBD//

INFO SECDEF WASHINGTON DC//DUSDL/MDM//  
COMDT USALMC FT LEE VA//ASTZ-LSN-R//  
DLA FT BELVOIR VA//DCIA//DLSC/DLSC-LE/DLSC-LC//  
DCMC FT BELVOIR VA//OE//  
DCPSOCOLUMBUSOH //PROSSER//

UNCLAS

SUBJECT: DEMILITARIZATION (DEMIL) PROGRAM MANAGEMENT BULLETIN 99-004, DOD  
DEMILITARIZATION TRAINING

A. DOD 4160.21-M-1, DOD DEMILITARIZATION MANUAL

1. THE DOD DEMILITARIZATION AND TRADE SECURITY CONTROLS PROGRAM OFFICE IS RESPONSIBLE FOR THE DEVELOPMENT AND MAINTENANCE OF AN APPROPRIATE DOD DEMILITARIZATION TRAINING PROGRAM. THE DOD DEMILITARIZATION PROGRAM COURSE (DDPC) HAS BEEN ESTABLISHED AND INCLUDED IN THE CURRICULUM (COURSE NUMBER ALMC-BD) AT THE U.S. ARMY LOGISTICS MANAGEMENT COLLEGE (ALMC), FORT LEE, VA.

2. PENDING FORMAL CHANGE TO REF A, THIS COURSE, AND TRIANNUAL REFRESHER COURSES, ARE MANDATORY FOR ALL DOD PERSONNEL RESPONSIBLE FOR THE MANAGEMENT, ADMINISTRATION AND/OR OVERSIGHT OF ANY ASPECT OF THE DOD DEMILITARIZATION AND/OR TRADE SECURITY CONTROLS PROGRAMS. THIS INCLUDES, BUT NOT LIMITED TO, TSC INVESTIGATORS AND OTHER DOD INVESTIGATORS INVOLVED WITH IMPORT OR EXPORT OF DOD MATERIALS OR OTHER TRADE SECURITY CONTROL MATTERS, INVENTORY MANAGERS, TECHNICAL MANAGERS, EQUIPMENT SPECIALISTS, CATALOGING SPECIALISTS, WEAPONS SYSTEMS PROGRAM MANAGERS, PROCURING CONTRACTING OFFICERS, PROPERTY ADMINISTRATORS, PLANT CLEARANCE OFFICERS, QUALITY ASSURANCE SPECIALISTS, TERMINATION CONTRACTING OFFICERS, AND SALES CONTRACTING OFFICERS.

3. SERVICE/AGENCY DEMILITARIZATION PROGRAM MANAGERS MUST ENSURE THAT SUBORDINATE ACTIVITIES HAVE PROGRAMMED FOR THE DDPC REQUIREMENTS, THAT CLASS ALLOCATIONS ARE SATISFIED FOR EACH CLASS SCHEDULED AND THAT APPROPRIATE INPUT IS MADE TO THE ARMY TRAINING REQUIREMENTS AND RESOURCES SYSTEM (ATRRS) IN A TIMELY MANNER, TO MINIMIZE RESOURCING IMPACT. CLASSES WILL BE HELD ON-SITE AT THE DOD COMPONENT DESIGNATED ACTIVITIES. THE HOSTING DOD COMPONENT WILL BE RESPONSIBLE FOR FUNDING OF THE INSTRUCTOR'S TRAVEL AND ACTUAL COSTS.

4. THIS MANDATORY TRAINING REQUIREMENT WILL BE INCORPORATED INTO THE REWRITE OF REF A, EXPECTED TO BE PUBLISHED JUNE 1999.

5. RETRANSMISSION OF THIS MESSAGE IS AUTHORIZED AND WIDEST DISSEMINATION IS STRONGLY ENCOURAGED. ALMC POCs FOR TRAINING ARE MR. GEOFFREY NOYES, DSN 539-4372 OR MR. PETE HUDIK, DSN 539-4318. POC FOR THIS MESSAGE IS MR. JACK W. BLACKWAY, DOD DEMIL PM, DLSC-LC.

*Handwritten:* \$160  
Batteries & Charger

*Handwritten:* X1910  
Michelle Gilling  
Jan 7 #21,500  
+54%  
1968  
+

# Enclosure 77

## QC Meeting of 21 November 2002 Attendance Sheet

QC Meeting Minutes  
Bi-Weekly QC Meeting  
November 21, 2002  
Work performed from 11-11 to 11-20-2002  
Contract #N62470-97-D-5000, D.O. 0062  
Indian Head Division - Site 41  
Naval Surface Warfare Center  
Indian Head, Md.

Meeting conducted by:  
Ernie Duke (Shaw E&I)

<b>Attendees:</b> Cathy Gardner Jeff Morris Joe Rail Shawn Jorgensen Greg Klaas Joe Walker	ROICC, IH EFA Ches. EFA Ches. IHDiv-NSWC Env. ROICC Shaw E&I	George Latulippe by phone Dan Pringle Steve Carriere Jim Dunn Janna Staszak Randy Johnson	Tetra Tech NUS Shaw E&I Shaw E&I Shaw E&I Shaw E&I Shaw E&I
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### 1. COMMENTS FROM THE PREVIOUS MEETING MINUTES

### 2. VARIANCE REQUEST/REQUEST FOR INFORMATION/WORK DIRECTIVES STATUS:

#### 2a. Variance Request and Request for Information Approved Since Last Meeting/Pending Approval

VR/RFI	DATE INITIATED	DESCRIPTION	STATUS
RFI-001	11-15-02	OE Filler Material	Response Received

#### 2b. Technical Directives Approved since Last Meeting/Pending Approval

TD No.	DATE INITIATED	DESCRIPTION	STATUS
TD-001	11-1-02	Segregating and Demilitarizing of OE Items	Approved 11-12-02

### 3. SCHEDULE AND STATUS OF WORK:

#### 3a. Work accomplished since last meeting

DEFINABLE FEATURE	ACTIVITY	PREPARATORY PHASE DATE	INITIAL PHASE DATE	FOLLOW-UP STATUS	ACTIVITY SCHEDULED COMPLETION
01115 Site Setup	*Mobilized equipment and personnel	11-13-02	11-13-02	Ongoing	
Segregation and Demilitarization of OE Items	*Began identifying, inspection segregating and marking OE items by UXO Specialist. *Began cutting and demilitarizing OE items.	11-12-02	11-13-02	Ongoing  Ongoing	

#### 3b. Work to be accomplished before the next scheduled meeting (includes both on-site and off-site work and testing).

- Continue identification, inspection and segregation of OE items
- Continue cutting and demilitarizing of OE items
- Begin collecting CADS

**Enclosure 77**  
**QC Meeting of 21 November 2002 Attendance Sheet**

SCHEDULED PREPARATORY PHASES PRIOR TO NEXT MEETING	SCHEDULED DATE
None Scheduled	

**4. REWORK STATUS**

**4a. Rework items identified and pending correction**

DATE IDENTIFIED	DESCRIPTION OF REWORK REQUIRED	ESTIMATED COMPLETION DATE
	None	

**4b. Rework items completed since last meeting**

DATE IDENTIFIED	DESCRIPTION OF REWORK REQUIRED	DATE COMPLETED
	None	

**5. STATUS OF SUBMITTALS:**

**5a. Submittals reviewed and approved since last meeting**

SPEC. SECTION	TRANSMITTAL # AND SUBMITTAL DESCRIPTION	DATE APPROVED
	None	

**5b. Submittals pending approval**

SPEC. SECTION	TRANSMITTAL # AND SUBMITTAL DESCRIPTION	DATE SUBMITTED	DATE APPROVAL REQUIRED	REQUIRED BY GVMT OR CONTR
	None			

**5c. Submittals required in the near future**

SPEC. SECTION	SUBMITTAL DESCRIPTION	ANTICIPATED DATE TO BE SUBMITTED	ESTIMATED DATE REQUIRED	GVMT OR CONTR APPROVAL
	Waste Analysis	12-6-02		

**6. TESTING:**

**6a. Testing performed since last meeting**

SPEC. SECTION	DESCRIPTION OF TEST	DATE COMPLETED
	None	

**6b. Testing scheduled prior to next meeting**

SPEC. SECTION	DESCRIPTION OF TEST	SCHEDULED DATE
	Waste Analysis	

**6c. Testing results pending/received since last meeting**

SPEC. SECTION	DESCRIPTION OF TEST	STATUS
	None	

**Enclosure 77**  
**QC Meeting of 21 November 2002 Attendance Sheet**

**7. DOCUMENTATION:**

Documentation required prior to next meeting

DOCUMENTATION DESCRIPTION	DATE REQUIRED
Daily Reports	Daily
QC Meeting Minutes	11-25-02

**8. STATUS OF AS-BUILTS:** (Define changes made since last meeting and provide an explanation for as-built drawings that are not up-to-date).

- No changes

**9. QC AND PRODUCTION ISSUES DISCUSSED AND RELATED RESOLUTIONS:**

- No weather delays.

Total days of weather delays to date	Days of delay this period
0 Days	0 Days

**10. OTHER ITEMS DISCUSSED:**

- A Pre-Construction Meeting was conducted on Tuesday, November 12, 2002 at 1000 hrs. Met with Joe Minter at 1300hrs to further discuss the scrap.
- Non-OE items were marked for separate handling and disposal. A cost estimate for handling and disposing of these items was requested.
- Received response for OE filler. Solid filler materials are to be incorporated into the site waste stream. The representative waste sample of the waste is to contain a proportional amount of these materials. The OE filler will be sampled as part of the buried debris.
- Some OE items present problems with demilitarization. Some are sealed and can not be certified inert to cut or drill into. Some are filled with concrete, which need to be vented prior to cutting to prevent a mechanical explosion. To date, after processing 35 – 40% of the site, of 71 items found, 42 can be handled and 29 cannot be handled. A procedure will be developed and reviewed with Base Safety to deal with the items that cannot be handled.
- The piles on site are not soil piles as originally believed, but OE or scrap piles covered with soil. The number of OE items has increased significantly.
- Tailgate meetings are held at 0630 at the Site 12 trailer and attendance is open.
- A cost estimate for the non-OE related scrap at the western and southern sides of the Scrap Yard, including the railroad car, milling machines, drums, tanks, boiler, and small office trailer, is being prepared and will be submitted to Joe Minter at the Property Disposal Office.

**11. ACTION ITEMS:**


(Include items that may require revising the QC plan or changes in procedure)

- A modification will be prepared for segregating and demilitarizing OE items.

**12. DATE OF NEXT SCHEDULED QC MEETING:**

Thursday, December 12, 2002 at 1030.

## Enclosure 78. IHD Fire Dept Precon Handout

	<b>Naval Sea Systems Command Indian Head Division Naval Surface Warfare Center</b>  <b>Contractor's Fire Regulations</b>	
Description: Fire Regulations specific to contractors aboard NSWC Indian Head.	Original Date: 19 Sept. 2001	
Approved: Fire Chief <i>John W. Simpson</i>	Revision:	

1. All contractor personnel are required to comply with the established fire regulations. Failure to comply may result in removal from the installation.
2. Contractors will not secure or tamper with fire protection systems in facilities without written permission from the fire protection manager, building supervisor and the ROICC Inspector. This includes securing the power or water supply to any facility as well as fire extinguishers.
3. The contractor must supply fire extinguishers of proper type and size for the fire hazards present in their particular area. The fire department will not service these extinguishers.
4. Work requiring or producing sparks or an open flame shall require a hot work permit prior to that work beginning. Inside the restricted area, the safety department shall issue this permit. Outside of this area the fire department shall issue the permit. It is strongly suggested that any work requiring a hot work permit be requested as soon and prior to the actual work being performed as possible. This will allow for the proper arrangements should shutting off fire protection systems be required.
5. Open burning of any type is prohibited.
6. Heaters and heat producing appliances (including coffeepots and hot plates) must meet applicable regulations prior to use.
7. Flammable and combustible liquids will be stored only in approved containers and in accordance with NFPA 30. In addition, fueling done from one vehicle to another (no matter the method of transfer or fuel being used) requires that the two vehicles be grounded/bonded together before any fueling operation is undertaken.
8. Contractor vehicles will at no time block and or obstruct fire lanes, fire hydrants, fire department connections, fire alarm boxes, or access for fire apparatus. Any work that requires any type of road blockage shall be made known to the fire department prior to taking place.

## Enclosure 78. IHD Fire Dept Precon Handout

9. Emergency services are available to all personnel on the installation. All personnel shall be familiar with the methods of sounding the alarm. A copy of the fire bill is attached for explanation.
  - a. Fire and Emergency Medical assistance calls dial 743-4333
  - b. Alarm boxes are also located through out the installation. Pull down handle and then standby the alarm box for assistance.
10. Entry into confined spaces is by permit only. While the fire department does not issue these permits they are responsible for rescue/emergency assistance. For these reasons, the fire department shall be notified prior to any entry. The precise location, person in charge or responsible and a recall number shall be made available. Should the fire department become engaged in operations elsewhere, the need for removing personnel from the confined space may be necessary.
11. No use of fire hydrants without prior authorization is permitted.

If the fire department may be of assistance please do not hesitate to call.

Fire Department Dispatch (business line) 743-4370  
Fire Prevention (Inspections) 743-4319  
**Emergencies 743-4333**

**Enclosure 79**  
**Communications Concerning Site 41**

COMMUNICATIONS BETWEEN PARTIES  
CONCERNING SITE 41- SCRAP YARD ISSUES

SITE 41-Scrap Yard COMMUNICATIONS, MEETINGS, OR TOURS	Dates	From	To	CC	CONTENT
Email, documenting JSM & SJ discussions following IHIRT meeting	26Jun02	SJ	JM, DP	JSM	Scrap Yard Code 11 receiving practices & limited (small) funding for disposal. /// Code 04 will not certify concrete filled rocket motors inert...
Email, following site tour.	07Aug02	JM	EFACHES Logistics and financial agents	JSM	Removal Action Contractor OHM AKA Shaw E&I identifies potential UXO (explosive issue) after site visit ...
Email, requesting meeting	12Aug02	SJ	WB, MH, JM		
Email, synopsis of meeting & site tour	22Aug02	SJ	WB, JM, JSM, BD	CLD, CG, DP, FJ, NM	Contractor could segregate scrap into 5X piles, demilled 3X, potentially explosive scrap...
Email	23Aug02	SJ	WB	JM, BD, NM, DP, JSM, CG	Direction on authorities for certifying items Inert for disposal...
Email	23Aug02	NM	FJ, FC, JMW, STW, RS	SJ	Assignment of Code 042 personnel to support removal of Site 41 Scrap Yard...
Email	23Oct02	WB	SJ, FJ	WB, DP, JM	Revised UXO Support Plan for Scrap Yard. CAT III other Non-Explosive Filled Items...
Email w/attached Final UXO Plan submitted to NAVY	25Oct02	DP	SJ, CG, JM, WB, TM, SC, JAD Jr		Final UXO submitted for Navy Acceptance...
Email to NOSA	25Oct02	SJ	SMM	EMK, JM	Request NOSA review
Email from NOSA	05Nov02	SMM	SJ	EMK	NOSA recognizes indiscriminate use of ordnance terminology... NOSA reiterates contractors' limitations...
Email JM to LBG	13Nov02	JM	LBG	CG, SJ	RPM assumes NOSSA thorough review & 'acceptance'
Email from Code 46C to	06Nov02	SJ	DB		Code 41 interprets NOSA & DDESB role per OP5... 08 Nov02 response fwd CHES RPM, contractor...

COMMUNICATIONS ON SITE 41



**Enclosure 79**  
**Communications Concerning Site 41**

COMMUNICATIONS BETWEEN PARITES  
 CONCERNING SITE 41- SCRAP YARD ISSUES

Email- Summarizing Scrap Yard Meeting for concerned parties (Supply, Contractor, ROICC, Code 041, 042, 046, & Public Works	06Nov02	SJ	CG,CJ,RH,KG JSM,EJ,TL MA, JF,		
Email	01Nov02	ED	CG		Tech Directive 001 proposes 'Chg to SOW'
Email	04Nov02	CG	JM		Fwd for rev&approval...
Email	06Nov02	JM	CG		OE Scrap Yard removal funded by TO #0077...

JM- Jeff Morris- RPM, LBG- LB Goforth Const. OSH Mgr., EFACHES, NAVFAC CG- Cathy Gardner, Engr. ROICC NSWC IH, EFA CHES CJ- Carl Jarvis Supr. Engr ROICC NSWC IH, EFACHES RH- Lt R Hime GK- Greg Klauss Inspt. ROICC NSWC IH, EFACHES	EFA CHES, NAVFAC EFACHES, NAVFAC ROICC NSWC IH, EFA CHES ROICC NSWC IH, EFACHES ROICC NSWC IH, EFACHES	SJ- Shawn Jorgensen- Activity POC IH NSWC, Code 046C HM- Heidi Morgan IH NSWC, Code 046 CD- Cheryl Deskins IH NSWC, Code 046  DB- Dave Bode Explos. Saf. Div. Dir. IH NSWC, Code 041 NM- Norman Moore OSH Div. Dir. IH NSWC, Code 042 FJ- Frank James OSH/UXO Inspt. Code 042 FC- Fred Cox; JMW- Joseph M Woodland; STW-Silas T Williamson; RS-Roderick Spruill- OSH/UXO Inspt. Code 042
DP- Dan Pringle- WB- William Bacon- TM- Tim Mathisen SC- Steve M Carriere JAD Jr- James A Dunn Jr-	OHM AKA Shaw E&I OHM AKA Shaw E&I OHM AKA Shaw E&I OHM AKA Shaw E&I OHM AKA Shaw E&I	JSM- Joe S Minter -Supply, Property Disposal Off. IH NSWC Code 112 TL-LCDR T LYONS- Supply Dir. Code 11 EJ- Ed Jackson- Supply

COMMUNICATIONS ON SITE 41

**Enclosure 79**  
**Communications Concerning Site 41**

**Goforth, Linda B (EFACHES)**

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**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:27 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: SITE 41 ISSUES

**Importance:** High

-----Original Message-----

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Thursday, June 27, 2002 1:34 PM  
**To:** 'Pringle, Daniel'  
**Cc:** 'Jorgensen Shawn'  
**Subject:** FW: SITE 41 ISSUES  
**Importance:** High

Dan,

I want to follow up on this with you - please let Shawn know what you need the base to do and what you guys will take care of under the contract. He recalls discussing with your folks (probably Larry and Dave) during the site visit that they would include some space in the estimate to address any remaining scrap/debris that the base couldn't get rid of in time.

Jeff

-----Original Message-----

**From:** Jorgensen Shawn A IHMD [mailto:JorgensenSA@ih.navy.mil]  
**Sent:** Wednesday, June 26, 2002 10:30 AM  
**To:** Jeff Morris (E-mail); Dan Pringle (E-mail); George Latulippe (E-mail)  
**Cc:** Minter Joseph S IHMD; Morgan Heidi A IHMD  
**Subject:** SITE 41 ISSUES

Jeff and Dan,

I just met with Joe Minter, our Property Disposal Officer, concerning the Scrap Yard. I explained to him our plans...phased approach...soil removal...concrete sampling...potential cracked concrete...potential sampling of soil under the concrete pad...etc.

We had some questions during our IHIRT meeting and I tried to get them answered. First, they are currently using dumpsters and will continue to use dumpsters in the future for the receipt of all scrap metal. Scrap metal is no longer being placed on the ground. These dumpsters (which are on wheels) can be moved within the Scrap Yard, as necessary, during the cleanup.

Joe will only need 1/3 to 1/2 of the Scrap Yard when all is said and done. He will, however, need to have adequate access to the upper level (on the right as you enter the Scrap Yard). Currently, you may recall, there is a dirt "road" going up to the second level. The entryway is where most of the erosion is occurring. This erosion problem will need to be repaired and perhaps we can provide a "stabilized" access to the upper level.

The gas cylinders in Scrap Yard should be moved out by the time our work begins.

Dan: Would it be best if the fire extinguishers are gone, too?

**Enclosure 79**  
**Communications Concerning Site 41**

Dan: We are having trouble getting rid of the concrete filled rocket motor casings. Our Safety Department won't certify them inert since they cannot see inside them and we don't have any documentation stating that they are, in fact, inert. Have you dealt with this type of situation elsewhere? If you know of a way to get rid of these, that would be most helpful.

Dan: Is there anything else within the Scrap Yard (based on your previous visit or looking at some of the photos that were taken) that you believe we need to get rid of prior to you performing your work? The reason I ask is that Joe received a very, very limited amount of money to get rid of stuff in the Scrap Yard, so he will have to be selective in what he can dispose of.

Dan: One last thing, if we cannot and you cannot find a way to get rid of the concrete filled rocket motor casings, should we move them to the upper level or leave them on the lower level?

George/Jeff: I don't recall...did we sample the upper level in the Scrap Yard? I have seen non-PCB transformers up there, but that doesn't mean that PCB transformers (or other items that may cause problems) weren't stored there at one time.

Thanks,  
Shawn Jorgensen  
Indian Head Division  
Naval Surface Warfare Center  
ATTN: Code 046C, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
Phone - (301) 744-2263  
Fax - (301) 744-4180  
Pager - (301) 743-1864  
(can be paged through [www.arch.com](http://www.arch.com) <<http://www.arch.com/>> )  
Email - [jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)

**Enclosure 79**  
**Communications Concerning Site 41**

**Goforth, Linda B (EFACHES)**

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**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:23 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: Indian Head Issue - Scrap Yard

-----Original Message-----

**From:** Douglas, Cindy T (EFACHES)  
**Sent:** Friday, August 09, 2002 1:51 PM  
**To:** Morris, Jeffrey W (EFACHES)  
**Subject:** RE: Indian Head Issue - Scrap Yard

Thanks, Jeff-

I attempted to cut & paste the action item for ENV from the meeting minutes. However, there was a bit of discussion as to the exact location that has the concern from the PWO & DepPWO. At the end of the conversation, there was some certainty as to the location. Basically, the direction that was given is stated below in the form of an action item:

**(ENV) JEFF MORRIS IS REQUESTED TO DISCUSS THE SCRAP YARD IR SITE AND IDENTIFY THE SITE NUMBER ASAP W/ THE ROICC; provide an update of rac projects on a regular basis for roicc/pw**

The ROICC is still concern that RAC current project status is not being provided on a monthly basis in the form of an update or the ACQ status sheet is not being updated for the ROICCs use and information. Additionally, your presence was missed.

I hope you can understand my brief note above. It is simply a busy day for me :-)

CTD

-----Original Message-----

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, August 09, 2002 1:41 PM  
**To:** Douglas, Cindy T (EFACHES)  
**Subject:** RE: Indian Head Issue - Scrap Yard

Cindy,

This is the tickler you requested.

Jeff

-----Original Message-----

**From:** Douglas, Cindy T (EFACHES)  
**Sent:** Wednesday, August 07, 2002 3:43 PM  
**To:** Morris, Jeffrey W (EFACHES); Rozzelle, Margaret M (EFACHES)  
**Cc:** Gilbertson, Paula A (EFACHES); Bryan, Mike (EFACHES); 'Jorgensen Shawn'  
**Subject:** RE: Indian Head Issue - Scrap Yard

Jeff-

Perfect timing! I will bring it up to the PWO tomorrow in the team meeting and provide you with any feedback. However, I need a tickler to provide you with feedback. I will be on leave

**Enclosure 79**  
**Communications Concerning Site 41**

immediately following the meeting and will return to the office on Friday.

Thanks for the info.

Cindy

-----Original Message-----

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Wednesday, August 07, 2002 2:57 PM  
**To:** Douglas, Cindy T (EFACHES); Rozzelle, Margaret M (EFACHES)  
**Cc:** Gilbertson, Paula A (EFACHES); Bryan, Mike (EFACHES); 'Jorgensen Shawn'  
**Subject:** Indian Head Issue - Scrap Yard  
**Importance:** High

Cindy, Margaret,

We have a problem with one of our IR sites, the Scrap Yard, at Indian Head where we have a Removal Action set to go in late September or October. The clean-up contractor (RAC) needs to have access to the concrete pad that makes up most of the scrap yard in order to remove contaminated soil and clean the pad in preparation for sampling to determine the decontamination requirement. While the Base has been working to remove the existing scrap, a site visit last week by the RAC identified that much remains, some of it potential UXO (explosive issue). We have gone to great lengths in dealing with the regulators, as well as DoD and DoN, to get permission to conduct this Removal Action at a time when a policy dispute between DoD and EPA has things pretty well shut down across DoD. The Base needs to aggressively clear the stuff from the scrap yard so the RAC can perform. Not only would his ability to do the work be hampered, but our costs would go up, which is unsatisfactory. It goes without saying that HQ would not permit us to use ER,N funds to do something the Base is responsible for. I would be remiss if I didn't pass on a concern that any scrap removed from the dirt could be contaminated and require cleaning prior to shipping.

I will be tied up next Wednesday and Thursday at our partnering meeting with EPA and MDE. If you can carry this message to the PWO it will provide support for the Base RPM's efforts to push the scrap removal.

Thanks!

Jeff

**Enclosure 79**  
**Communications Concerning Site 41**

**Goforth, Linda B (EFACHES)**

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**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:22 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: MEETING ON WEDNESDAY, 21 AUGUST 2002 AT 1000 HOURS

-----Original Message-----

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Monday, August 12, 2002 4:24 PM  
**To:** 'Jorgensen Shawn A IHMD'; William Bacon (E-mail); Morgan Heidi A IHMD; Morris, Jeffrey W (EFACHES)  
**Subject:** RE: MEETING ON WEDNESDAY, 21 AUGUST 2002 AT 1000 HOURS

Yes - I will put it on my calendar.

Jeff

-----Original Message-----

**From:** Jorgensen Shawn A IHMD [mailto:JorgensenSA@ih.navy.mil]  
**Sent:** Monday, August 12, 2002 4:20 PM  
**To:** William Bacon (E-mail); Morgan Heidi A IHMD; Jeff Morris (E-mail)  
**Subject:** MEETING ON WEDNESDAY, 21 AUGUST 2002 AT 1000 HOURS

Bill,

I have tentatively scheduled a meeting with you, Dave Bode (Explosive Safety), Joe Minter (Property Disposal Officer and COG of the Scrap Yard), and me on Wednesday, 21 August 2002 from 1000 - 1130 hours. I need to confirm with Joe that the date and time are okay with him.

However, you probably want to pencil this in on your calendar. We can always discuss this with Dave and Joe may be able to send one of his workers to the site in his place.

Heidi and Jeff: Are you interested in attending?

V/R,  
Shawn Jorgensen  
Indian Head Division  
Naval Surface Warfare Center  
ATTN: Code 044SJ, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
Phone - (301) 744-2263  
Fax - (301) 744-4180  
Pager - (301) 743-1864  
(can be paged through [www.arch.com](http://www.arch.com) <<http://www.arch.com/>> )  
Email - [jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)

**Enclosure 79**  
**Communications Concerning Site 41**

RE: SCRAP YARD MEETING AND SITE VISIT

Page 1 of 1

**Goforth, Linda B (EFACHES)**

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**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:21 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: SCRAP YARD MEETING AND SITE VISIT

-----Original Message-----

**From:** Bacon, William [mailto:William.Bacon@shawgrp.com]  
**Sent:** Thursday, August 22, 2002 5:09 PM  
**To:** 'Jorgensen Shawn A IHMD'; Bacon, William; 'Jeff Morris (E-mail)'; 'Bode David A IHMD'; 'Minter Joseph S IHMD'  
**Cc:** 'Deskins Cheryl L (Sherry) IHMD'; 'Gardner Cathy B IHMD'; Pringle, Daniel; 'James Frank IHMD'; 'Moore Norman J IHMD'  
**Subject:** RE: SCRAP YARD MEETING AND SITE VISIT

Shawn,  
I agree with your synopsis of the issues.  
Bill

William Bacon  
OE Technical Director  
Shaw E & I  
703-222-6634

-----Original Message-----

**From:** Jorgensen Shawn A IHMD  
**To:** William Bacon (E-mail); Jeff Morris (E-mail); Bode David A IHMD; Minter Joseph S IHMD  
**Cc:** Deskins Cheryl L (Sherry) IHMD; Gardner Cathy B IHMD; Dan Pringle (E-mail); James Frank IHMD; Moore Norman J IHMD  
**Sent:** 8/22/2002 1:13 PM  
**Subject:** SCRAP YARD MEETING AND SITE VISIT

All,

I wanted to write up a little something on the meeting and site visit to the Scrap Yard that occurred today.

I think that we are all on the same page with the cleanup, i.e., items will be separated into a few piles, good scrap (5x), scrap that will need to be demiled (3x), and potentially explosive scrap (which will require assistance from someone, probably Dahlgren, to dispose of). Work is expected to begin sometime in September/October, if all goes well.

The two main challenges with the Scrap Yard Removal Action are:  
1) Screening. There is a lot of rubble at the site. Therefore, while screening, not only will CAD-type devices get screened out, so will the rubble. Separating this stuff will be time consuming. As a note, Bill stated that the Scrap Yard is a retired EOD guy's dream because it looks like the EOD School "Bone Yard" was moved directly to the Scrap Yard.

1/14/2003

**Enclosure 79**  
**Communications Concerning Site 41**

RE: SCRAP YARD MEETING AND SITE VISIT

Page 2 of

2) Demil for heftier stuff. There are some shapes out there that have cases that are quite thick, not to mention those filled with concrete. Trying to demil these items will definitely be a challenge.

Bill will look into dealing these challenges.

Jeff will look into the potential for ER,N funds to pay for some of this work. Due to limited funding, we may have to screen and separate, but won't be able to demil. Therefore, arrangements will need to be made on where these items will be stored. We may be able to store these items on the upper level of the Scrap Yard, if we can get it cleaned up first. However, we will need to keep from recontaminating this area when we move the items there.

Joe will continue to get items removed from the Scrap Yard as best as he can.

I hope that this correctly summarizes where we stand with the Scrap Yard.

Please let me know of anything I stated incorrectly or anything that I missed (I just tried to touch on the highlights).

I will be forwarding the photographs I took today in a different email.

Sincerely,  
Shawn Jorgensen  
Indian Head Division  
Naval Surface Warfare Center  
ATTN: Code 044SJ, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
Phone - (301) 744-2263  
Fax - (301) 744-4180  
Pager - (301) 743-1864  
(can be paged through <<http://www.arch.com/>> [www.arch.com](http://www.arch.com/))  
Email - [jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)

1/14/2003



**Enclosure 79**  
**Communications Concerning Site 41**

**Goforth, Linda B (EFACHES)**

---

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:20 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: SCRAP YARD MEETING AND SITE VISIT

-----Original Message-----

**From:** Jorgensen Shawn A IHMD [mailto:JorgensenSA@ih.navy.mil]  
**Sent:** Friday, August 23, 2002 8:28 AM  
**To:** William Bacon (E-mail)  
**Cc:** Jeff Morris (E-mail); Bode David A IHMD; Dan Pringle (E-mail);  
Minter Joseph S IHMD; Gardner Cathy B IHMD; Moore Norman J IHMD  
**Subject:** FW: SCRAP YARD MEETING AND SITE VISIT

Bill,

You may recall during our meeting yesterday that there was a question on who in the government would sign the documents (possibly 1348's) agreeing that items identified by your guys as inert are inert.

From the email below, Code 042 personnel (Frank James or Fred Cox) will provide the "government" signature on these items. Both men are former EOD, so they are well versed in this area.

FYI: Code 042 is the Occupational Safety and Health Director (Norman Moore). Some of his employees are inspectors that provide work permits for any work performed in the Restricted Area. They also green tag items, which designates the items as inert.

Shawn

-----Original Message-----

**From:** Moore Norman J IHMD  
**Sent:** Friday, August 23, 2002 6:23 AM  
**To:** James Frank IHMD; Cox Fred IHMD; Woodland Joseph M (Joe) IHMD;  
Williamson Silas T IHMD; Spruill Roderick F IHMD  
**Cc:** Jorgensen Shawn A IHMD; Bohli William H IHMD; Kubick Marcia E IHMD  
**Subject:** FW: SCRAP YARD MEETING AND SITE VISIT

Frank and Fred,

I would like for you to be primary safety POCs for this project. The rest of you should assist as indicated by Frank and Fred.

Dave Bode attended the meeting yesterday and briefed me. He mentioned that the effort will probably start within a month. Your responsibility will be to write necessary work permits and validate by countersignature that items designated as inert by the contractor are inert. The contract scope and specifications are in my office. Contact Shawn to get a more complete description of the project and our support requirements.

Thanks, Norman.

-----Original Message-----

**Enclosure 79**  
**Communications Concerning Site 41**

Revised UXO Support Plan for Scrap Yard

Page 1 of

**Goforth, Linda B (EFACHES)**

---

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:17 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: Revised UXO Support Plan for Scrap Yard

-----Original Message-----

**From:** Bacon, William [mailto:William.Bacon@shawgrp.com]  
**Sent:** Wednesday, October 23, 2002 11:58 AM  
**To:** 'Jorgensen Shawn A IHMD'; James Frank IHMD  
**Cc:** Bacon, William; Pringle, Daniel; Morris, Jeffrey W (EFACHES)  
**Subject:** RE: Revised UXO Support Plan for Scrap Yard

Shawn

You are correct. If a piezoelectric crystal component of a fuze were discovered in the scrap yard without the detonator, crushing as with other small INERT items would be accomplished on site. If the entire fuze were discovered, EODMU Two Det Dahlgren would have to respond.

Bill

William Bacon  
OE Technical Director  
Shaw Environmental & Infrastructure  
703-222-6634

-----Original Message-----

**From:** Jorgensen Shawn A IHMD [mailto:JorgensenSA@ih.navy.mil]  
**Sent:** Wednesday, October 23, 2002 10:42 AM  
**To:** James Frank IHMD  
**Cc:** William Bacon (E-mail); Dan Pringle (E-mail); Jeff Morris (E-mail)  
**Subject:** RE: Revised UXO Support Plan for Scrap Yard

Frank: It's my understanding, since these are non-explosive filled, that they will be crushed on-site. If that is not possible, then I believe they will be sent to Dahlgren for detonation, since we can't detonate here.

Dan and Bill: Do you agree or did you have something else in mind for these items? Either way, based on Frank's comments, we need to clarify in this paragraph where this work will be done.

Shawn

-----Original Message-----

**From:** James Frank IHMD  
**Sent:** Wednesday, October 23, 2002 7:49 AM  
**To:** Jorgensen Shawn A IHMD  
**Subject:** RE: Revised UXO Support Plan for Scrap Yard

Shawn,

I talked to Dave about page A-3 under Category III for Other Nonexplosive Filled Items. (Last sentence "Crush or detonate piezoelectric (lucky) elements. Where will this be done?"

All the other changes I have no questions with.

1/15/2003

**Enclosure 79**  
**Communications Concerning Site 41**

Revised UXO Support Plan for Scrap Yard

Page 2 of 1

Frank

-----Original Message-----

**From:** Jorgensen Shawn A IHMD

**Sent:** Tuesday, October 22, 2002 3:41 PM

**To:** Pringle, Daniel

**Cc:** Mathisen, Tim; Bacon, William; Dunn Jr, James A; Carriere, Steve M.; 'Gardner, Cathy-IH ROICC Office'; 'Morris, Jeff (IH RPM)'; James Frank IHMD; Moore Norman J IHMD; Bode David A IHMD; George Latulippe (E-mail)

**Subject:** RE: Revised UXO Support Plan for Scrap Yard

Dan,

Attached are the comments from our Explosive Safety Division Director (Dave Bode), and a couple from me, on the revised UXO Support Plan. Please let me know if you have any questions.

I am still waiting on comments from Frank James of our OSH group. I asked for comments by Friday, 25 October 2002.

Shawn

-----Original Message-----

**From:** Pringle, Daniel [mailto:Daniel.Pringle@shawgrp.com]

**Sent:** Monday, October 21, 2002 6:24 PM

**To:** 'Gardner, Cathy-IH ROICC Office'; 'Jorgensen, Shawn- IH Env.'; 'Morris, Jeff (IH RPM)'

**Cc:** Mathisen, Tim; Bacon, William; Dunn Jr, James A; Carriere, Steve M.

**Subject:** Revised UXO Support Plan for Scrap Yard

Folks-Here is the revised UXO Plan for the UXO work (in .pdf format) at the Scrap Yard. This plan includes procedures for the identification, screening, demilling and disposal of the OE items at Site 41. Shawn-please pass this on to Base Safety for their review. If this plan is approved, we hope to start the UXO work at the scrap yard since this work will be out of scope and will require several weeks to complete. The coordination of the UXO work is critical and after this plan is reviewed, a meeting may be necessary to discuss in detail the step by step procedures and notifications necessary to complete the work. Feel free to give me a call at 412-380-6248 if you have any questions or would like a hard copy. I will be out of the office Tuesday and Wednesday but you can try my cell # at 240-375-2497.

<<Revised UXO Support Plan 10-21-02.pdf>>

**Daniel Pringle**  
**Shaw Environmental, Inc.**  
**2790 Mossdale Blvd.**  
**Monroeville, Pa. 15146**  
**Phone: 412-380-6248**  
**Fax: 412-858-3979**  
**Daniel.Pringle@Shawgrp.com**

1/15/2003

**Enclosure 79**  
**Communications Concerning Site 41**

Site 41 Final UXO Plan and Response to Comments

Page 2 of

-----Original Message-----

**From:** Pringle, Daniel [mailto:Daniel.Pringle@shawgrp.com]

**Sent:** Friday, October 25, 2002 2:48 PM

**To:** 'Jorgensen, Shawn- IH Env.'; 'Gardner, Cathy-IH ROICC Office'; 'Morris, Jeff (IH RPM)'; Mathisen, Tim; Bacon, William; Carriere, Steve M.; Dunn Jr, James A

**Subject:** Site 41 Final UXO Plan and Response to Comments

<<Scrap Yard UXO Plan.pdf>> <<Response to Comments.pdf>>

**Daniel Pringle**

**Shaw Environmental, Inc.**

**2790 Mosside Blvd.**

**Monroeville, Pa. 15146**

**Phone: 412-380-6248**

**Fax: 412-858-3979**

**Daniel.Pringle@Shawgrp.com**

1/14/2003

**Enclosure 79**  
**Communications Concerning Site 41**

Technical Directive for Site 41 with attachment

Page 1 of

**Goforth, Linda B (EFACHES)**

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**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:12 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: Technical Directive for Site 41 with attachment

More info on the contract side.

-----Original Message-----

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Wednesday, November 06, 2002 8:19 AM  
**To:** Gardner, Cathy B (EFACHES)  
**Subject:** RE: Technical Directive for Site 41 with attachment

Cathy,

This is necessary and I approve. I discussed the financial aspect with Dan Pringle and I want to fund it from the existing money so we may move ahead. I have budgeted sufficient funds to backfill the contract so I will prepare a scope and cost estimate for a mod and submit them to LANT.

Jeff

-----Original Message-----

**From:** Gardner, Cathy B (EFACHES)  
**Sent:** Monday, November 04, 2002 12:52 PM  
**To:** Morris, Jeffrey W (EFACHES)  
**Subject:** FW: Technical Directive for Site 41 with attachment

Jeff,

Attached is the Technical Directive with the cost proposal. Please review.

Cathy

-----Original Message-----

**From:** Duke, Ernie [mailto:Ernie.Duke@shawgrp.com]  
**Sent:** Friday, November 01, 2002 2:41 PM  
**To:** Gardner, Cathy B (EFACHES)  
**Cc:** Pringle, Daniel; Carriere, Steve M.  
**Subject:** Technical Directive for Site 41 with attachment

Cathy: Dan asked me to email this to you for Site 41. It is the Technical Directive for the preliminary work separating, screening and demilling the OE items.

<<TD-001, Site 41 OE.doc>> <<modsite-41.xls>>

1/14/2003

**Enclosure 79**  
**Communications Concerning Site 41**

Site 41 Final UXO Plan and Response to Comments

Page 1 of

**Goforth, Linda B (EFACHES)**

---

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:11 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: Site 41 Final UXO Plan and Response to Comments  
**Importance:** High

Linda,

Here's another memo that might be useful.

Jeff

-----Original Message-----

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Wednesday, November 06, 2002 9:54 AM  
**To:** 'Pringle, Daniel'  
**Cc:** 'Jorgensen Shawn'  
**Subject:** FW: Site 41 Final UXO Plan and Response to Comments  
**Importance:** High

Dan,

We have some preliminary comments from NOSA on the UXO work plan and are trying to get together with them to discuss things - stay tuned.

Jeff

-----Original Message-----

**From:** McCahill Sherry M NOSA  
**Sent:** Tuesday, November 05, 2002 12:08 PM  
**To:** Jorgensen Shawn A IHMD  
**Cc:** Klinghoffer Edward M NOSA  
**Subject:** RE: Site 41 Final UXO Plan and Response to Comments

Shawn,

I skimmed the document in question and I did note several explosives safety concerns. In particular, the terms "UXO" and "OE/UXO" are used indiscriminately. It was my understanding that the probability of encountering UXO on the site is low. If so, the contractor should be focusing on inert ordnance or ordnance-related scrap while including procedures to be followed in the event of encountering UXO. Please contact Ed Klinghoffer, X4966, for additional guidance regarding the explosives safety issue associated with this site. But as Ed and I discussed with Jeff, UXO should not be moved or dispositioned by the contractor when their function is limited to "UXO safety support" and the document should clearly reflect that. I'm planning to do a more in-depth review while I'm out but someone else from my office should be available to work with Ed while I'm gone.

Sherry

-----Original Message-----

**From:** Jorgensen Shawn A IHMD  
**Sent:** Friday, October 25, 2002 4:17 PM  
**To:** McCahill Sherry M NOSA  
**Cc:** Klinghoffer Edward M NOSA; Jeff Morris (E-mail)  
**Subject:** FW: Site 41 Final UXO Plan and Response to Comments

Sherry,

Jeff Morris asked me to forward this to you. It is the latest Scrap Yard UXO plan. If you have already looked at the version from last week, you will be happy to know that the Response to Comments contains all of the changes made to that document.  
Shawn

1/14/2003

**Enclosure 79**  
**Communications Concerning Site 41**

**Gardner, Cathy B (EFACHES)**

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**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Wednesday, November 13, 2002 2:31 PM  
**To:** Goforth, Linda B (EFACHES)  
**Cc:** Gardner, Cathy B (EFACHES); 'Jorgensen Shawn'  
**Subject:** Indian Head Scrap Yard Work

Linda,

I saw your email to Cathy Gardner on the work at the Indian Head Scrap Yard. We already provided NOSSA with a copy of the work plan and I met with Sherry McCahill and Ed Klinghoffer to discuss the requirements for the project. Essentially, the RAC has a team of OE experts and they may certify and demilitarize any OE items encountered. In the unlikely case where they run into an item they cannot certify, they will call Dahlgren EOD and set the item aside. These items are training shapes brought to the scrap yard for disposal - it is not a UXO site. The email below is the Indian Head Explosive Safety Division Director's opinion.

Please let me know if you need anything more from me.

Jeff

-----Original Message-----

**From:** Jorgensen Shawn A IHMD [mailto:JorgensenSA@ih.navy.mil]  
**Sent:** Friday, November 08, 2002 1:20 PM  
**To:** Morris, Jeffrey W (EFACHES)  
**Cc:** Dan Pringle (E-mail); William Bacon (E-mail)  
**Subject:** FW: NEED YOUR HELP

Jeff,

Below is the final word from our Explosive Safety Division Director.

In my opinion, based on this information, we should leave the UXO plan as it is, i.e., only call Dahlgren if something is found that is potentially explosive that cannot be moved.

I am forwarding this to Dan Pringle and Bill Bacon. If for some reason you do not agree, then please let them know.

Thanks,  
Shawn

> -----Original Message-----

> **From:** Bode David A IHMD  
> **Sent:** Friday, November 08, 2002 9:46 AM  
> **To:** Jorgensen Shawn A IHMD  
> **Cc:** Bohli William H IHMD; Deskins Cheryl L (Sherry) IHMD  
> **Subject:** RE: NEED YOUR HELP

>

> Shawn,

>

> The remediation that is being conducted at the scrap yard is environmental  
> and not explosive. We do not know that any explosive contamination exists  
> at the site. In fact we are relatively sure that none of the items are  
> live but we are going the extra mile to ensure the public is protected.  
> If we encounter an explosive item or an item that we cannot determine to  
> be inert then we will deal with it just like we do any suspect item that  
> we encounter while performing an operation. We will deal with the  
> specific item. We have encountered suspect/explosive items during other  
> operations for example the CBIRF parking lot construction.

>

**Enclosure 79**  
**Communications Concerning Site 41**

> Mike Olup (Indian Head) discussed this philosophy with Ed Klinghoffer  
> (NOSSA) and they agreed that a remediation plan was not necessary for the  
> scrap yard clean up.  
>  
> David A. Bode  
> Code 041 (Acting)  
> (301) 744-4384 (Voice)  
> (301) 744-6533 (Fax)  
> (301) 743-1914 (pager)/ plus text messages via <http://www.arch.com/message>  
> Indian Head Division, NSWC

>  
> -----Original Message-----  
> From: Jorgensen Shawn A IHMD  
> Sent: Wednesday, November 06, 2002 12:52 PM  
> To: Bode David A IHMD  
> Subject: NEED YOUR HELP  
> Importance: High

> Dave,

> I need your help concerning the Scrap Yard cleanup. In your  
> opinion, do we need to prepare an Explosive Safety Remediation Plan, as  
> described in OP 5, Page 2-20, Section 2-1.14.21?

> Sorry to ask for an answer as quickly as possible, but this is  
> rather urgent, since we hope to begin work on 12 November 2002 (next  
> week). If we have to prepare a plan, the requirements of what goes in the  
> plan (shown in OP 5, Page 2-22, Table 2-2) will take us a while to get  
> together. Then we will need to get approval from NOSSA and possibly the  
> DDESB.

> Thanks in advance for any help you can provide!  
> Shawn Jorgensen  
> Indian Head Division  
> Naval Surface Warfare Center  
> ATTN: Code 0448J, Bldg. D-327  
> 101 Strauss Avenue  
> Indian Head, MD 20640-5035  
> Phone - (301) 744-2263  
> Fax - (301) 744-4180  
> Pager - (301) 743-1864  
> (can be paged through [www.arch.com](http://www.arch.com) <<http://www.arch.com>>)  
> Email - [jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)  
>



**Enclosure 79**  
**Communications Concerning Site 41**

**Goforth, Linda B (EFACHES)**

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**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Friday, January 10, 2003 9:09 AM  
**To:** Goforth, Linda B (EFACHES)  
**Subject:** FW: SUMMARY OF MEETING ON REMOVAL OF RESIDUAL SCRAP AT SCRAP YARD  
PRIOR TO IR PROGRAM REMOVAL ACTION

Linda,

Here is some information on the plan to deal with the scrap. The other e-mail that addresses the site visit with Bill Bacon will follow.

Jeff

-----Original Message-----

**From:** Jorgensen Shawn A IHMD [mailto:JorgensenSA@ih.navy.mil]  
**Sent:** Wednesday, November 06, 2002 3:57 PM  
**To:** Gardner Cathy B IHMD; Jarvis Carl IHMD; Minter Joseph S IHMD;  
Jackson Edward L IHMD; Morgan Heidi A IHMD; Morris, Jeffrey W (EFACHES);  
Stacy Johnathan R IHMD; Deskins Cheryl L (Sherry) IHMD; Steve M.  
Carriere (E-mail); Ernie Duke; Randy Johnson  
**Cc:** Frontanes Jose A IHMD; Adams Michael T IHMD; Dan Pringle (E-mail);  
Bohli William H IHMD; Lyons Timothy J LCDR IHMD; Hime Russell V LT IHMD;  
Klaas Greg IHMD  
**Subject:** SUMMARY OF MEETING ON REMOVAL OF RESIDUAL SCRAP AT SCRAP YARD  
PRIOR TO IR PROGRAM REMOVAL ACTION

All,

The following is a summary of the major points of the meeting that was held 11/06/02 in Building 503 concerning the scrap remaining at the Scrap Yard. As discussed, this scrap will have to be removed from the Scrap Yard or disposed of prior to conducting the Removal Action under the Installation Restoration (IR) Program.

The IR cleanup will include handling (demil and removal of) the inert ordnance and ordnance-related scrap. In addition, the IR removal will handle the soil and items buried in the soil. The rest of the items, such as tanks, trailer, nose cones, transformer, etc., will need to be removed/disposed of using Activity funds/forces. This includes the rail car which is located just outside the Scrap Yard, since the tracks and contaminated soil will be removed, too.

The following action items resulted from the meeting:

- 1) Temporary Location to Operate and to Store existing items (Joe Minter and Shawn Jorgensen)  
Joe will find a temporary location to operate and to store items (if items must be moved for storage instead of being removed from the Activity). Joe will look at the truck yard (Building 290 area) for potential use. Shawn will assist in looking at other areas, such as the storage area before Building 719 and the area around Building 859, both of which belong to Code 210.
- 2) Transformer (Sherry Deskins)  
Sherry will have Bobby Harrison get with Joe Minter to try to get a sample and to assist with the relocation of the transformer.
- 3) Nozzles (Joe Minter)  
Joe will have these removed in the next week or two.
- 4) Railcar (John Stacy)

**Enclosure 79**  
**Communications Concerning Site 41**

John will discuss the removal of the railcar with Lou Scalfari.

5) Trailer, tanks, boiler, etc. (Joe Minter)  
Joe will get cost estimates on everything that needs to be disposed of. The Remedial Action Contractor (RAC), which is Shaw, will provide one estimate. Mullins will be contacted to provide another. Will probably need a third estimate.  
In addition, Joe will get a cost estimate from LBM to move the items to another location on-site.

6) Request funding from Command (Code 11 with assistance from Code 04)  
Commander Lyons will request funding from Command to dispose of or to move the items remaining in the Scrap Yard once the cost estimates have been received.

Time frames  
Shaw will begin working on cleanup of the inert ordnance and ordnance-related scrap on Tuesday, 12 November 2002. This work will take approximately 5 weeks. Therefore, all other scrap will need to be removed from the Scrap Yard by the end of 2002.

If you have any questions concerning this matter, please contact me on x2263.

Sincerely,  
Shawn Jorgensen  
Indian Head Division  
Naval Surface Warfare Center  
ATTN: Code 044SJ, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
Phone - (301) 744-2263  
Fax - (301) 744-4180  
Pager - (301) 743-1864  
(can be paged through [www.arch.com](http://www.arch.com) <<http://www.arch.com>>)  
Email - [jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)

#### CHRONOLOGY OF UXO SUPPORT PLAN APPROVAL

7/31/02 Site visit identified significant quantity of scrap remaining

8/5/02 EFACHES Counsel approves plan to conduct removal action

8/9/02 Draft UXO Work Plan submitted for Navy review

8/23/02 Residual scrap disposition meeting w/Base

10/2/02 Draft Work Plan comments submitted by Base Environmental RPM

10/6/02 Draft Work Plan comments submitted by EFACHES Environmental RPM

10/17/02 EFACHES Environmental RPM met with NOSSA and was given OK to use Shaw EOD experts to certify and demil scrap OE

10/21/02 Draft revised UXO Support Plan submitted for Navy review

10/22/02 Comments submitted by Base Explosives Safety Division

10/23/03 Comments submitted by Base Safety Office

10/25/02 Final Revised UXO Support Plan submitted to Navy

10/25/02 Revised UXO Support Plan forwarded to NOSSA

11/5/02 NOSSA provided comments on Revised UXO Support Plan - forwarded to Shaw

11/6/02 Revised UXO Support Plan forwarded to Base Explosives Safety Division (ESD)

11/6/02 Meeting btwn Base, ROICC, EFACHES RPM and Shaw regarding removal of remaining scrap

11/8/02 Base Explosives Safety Director met with NOSSA - concluded not a UXO project, but an environmental remediation, thus no UXO remediation plan required

11/8/02     Decision to accept plan forwarded to Shaw

11/13/02    EFACHES Safety Officer raises question about UXO  
work

11/13/02    EFACHES Environmental RPM provided ESD/NOSSA  
decision to Safety Officer

**Enclosure 80**  
**Comments on UXO Support Plan**

**UXO Support Plan & Work Plan SUBMITTAL REGISTER**

Reviewer Code, Division, Activity	Type of Submittal Material or Product	Documentation Requesting Review	Date Received from Reviewer	Documentation via Comment Sheet, Memo or E-mail
Code 041 & Code 042	Draft Final Proposed Plans for Site 41	Ser 046C/25	Sept. 2000	Email, CADS/PADS may be present which have not been certified inert...
JMorris	Draft Work Plan		16Oct02	
1) SJ Code 046	DRAFT UXO SUPPORT PLAN Site 41- Scrap Yard	1 <sup>st</sup> edition	02 Oct. 02	email dtd. 02Oct02
2)JM-J.Morris		1 <sup>st</sup> edition	07 Oct. & 16 Oct.02	email
3) Code 041& 046C		2 <sup>nd</sup> edition dtd 10/21/02	23Oct02	email
SMMcCahill Code NOSA IH NSWC	FINAL UXO SUPPORT PLAN Site 41- Scrap Yard	dtd 10/25/02	05 Nov02	Email- NOSA recognizes indiscriminate use of ordnance terminology...NOSA reiterates contractors' limitations... Cursory review.
Code 041 OE/UXO IH NSWC	FINAL UXO SUPPORT PLAN Site 41- Scrap Yard	06 Nov. 2002, Code 46C Request Code 41 interpretation/clarification of OP5 and role of NOSA & DDESB	08 Nov02 Code 041	Email, Remediation of Scrap Yard and Removal of abandon Scrap Yard items discussed

JM- Jeff Morris- RPM,	EFA CHES, NAVFAC	SJ- Shawn Jorgensen- Activity POC IH NSWC, Code 046C
LBG- LB Goforth Const. OSH Mgr., EFACHES, NAVFAC		HM- Heidi Morgan IH NSWC, Code 046
CG- Cathy Gardner, Engr. ROICC NSWC IH, EFA CHES		CD- Cheryl Deskins IH NSWC, Code 046
CJ- Carl Jarvis Supr.Engr ROICC NSWC IH, EFACHES		
RH- Lt R Hime ROICC NSWC IH, EFACHES		DB- Dave Bode Explos. Saf. Div. Dir. IH NSWC, Code 041
GK- Greg Klauss Inspt. ROICC NSWC IH, EFACHES		NM- Norman Moore OSH Div. Dir. IH NSWC, Code 042
		FJ- Frank James OSH/UXO Inspt. Code 042
		FC- Fred Cox; JMW- Joseph M Woodland; STW-Silas T Williamson; RS-Roderick Spruill- OSH/UXO Inspt. Code 042
DP- Dan Pringle-	OHM AKA Shaw E&I	
WB- William Bacon-	OHM AKA Shaw E&I	JSM- Joe S Minter -Supply, Property Disposal Off. IH NSWC Code 112
TM- Tim Mathisen	OHM AKA Shaw E&I	TL-LCDR.T LYONS- Supply Dir. Code 11
SC- Steve M Carriere	OHM AKA Shaw E&I	

uxoWrkPlansSubmittalLog

**Enclosure 80**  
**Comments on UXO Support Plan**

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**UXO Support Plan & Work Plan SUBMITTAL REGISTER**

JAD Jr- James A Dunn Jr-	OHM AKA Shaw E&I	EJ- Ed Jackson- Supply
		SMM-Sherry M McCahill- NOSA

uxoWrkPlansSubmittalLog

**Enclosure 80**  
**Comments on UXO Support Plan**

Retrieved from  
code 046C, S.J.  
on 13 Dec 2002

**COMMENTS FROM OUR SAFETY DEPARTMENT ON  
DRAFT FINAL PROPOSED PLAN FOR SITE 41  
of September 2000**

General

From Explosive Safety personnel (Code 041):

No comment.

From Occupational Safety and Health personnel (Code 042):

Page 3, Section 3.0, last paragraph. There may also be Cartridge Actuated Devices and Propellant Actuated Devices (CADs/PADs) projectiles that have not been certified inert.

(Note from SJ: Joe Minter, the operator of the Scrap Yard, has stated that once the Scrap Yard has been cleaned out (i.e., scrap removed), he plans to use roll-off type dumpsters to store scrap. During scrap removal, one of the dumpsters will be for potentially "non-inert" devices. Joe plans to have this work completed, including the treatment of potentially "non-inert" devices, prior to our remedial action effort. Therefore, the remaining scrap-only dumpsters can be rolled out to allow for our cleanup. However, there is a potential that residual devices could still be in the dirt and mud at the site. Therefore, an EOD-type is required during the remedial action.)

The following is required to perform alternative 2:

- a) Work Permit
- b) 40-hours training for inspectors
- c) Contractor must follow applicable local, state, and federal health and safety rules contained in the contract
- d) Precon meeting
- e) Trained Con Rep to administer contract
- f) On-site safety POC
- g) Safety Plan

Definitions:

Con Rep - Construction Representative. A person from the Resident Officer In Charge of Construction (ROICC) office that has the appropriate training to oversee the remedial action.

**Enclosure 80**  
**Comments on UXO Support Plan**

Precon meeting - Preconstruction meeting. A meeting for the remedial action contractor with Safety, Fire Department, and ROICC personnel to discuss the project, including hazards involved, emergency procedures, etc.

Work Permit - A permit received from our Safety Office, stating requirements that must be followed for work (remedial action) to take place.



**Enclosure 80**  
**Comments on UXO Support Plan**

REVIEWED FROM R46 LIBRARY  
S.I (0445I current)

5090  
Ser 046C/25  
25 Sep 00

MEMORANDUM

From: 046

Subj: REVIEW OF PROPOSED PLANS FOR SITE REMEDIATION

Encl: (1) Proposed Plan for Site 12 - Town Gut Landfill of Sep 00  
(2) Proposed Plan for Site 41 - Scrap Yard of Sep 00  
(3) Proposed Plan for Site 44 - Soak Out Area

1. Please review enclosures (1) through (3) by 3 November 2000.

2. We are required to prepare proposed plans as part of our public participation responsibilities under the Code of Federal Regulations, Title 40, Section 300.430(f)(2). The proposed plans will be made available to the public for comment prior to any work being performed at any site. Please note that these cleanups will not be performed prior to fiscal year 2002.

3. Included with the proposed plans are mailers that will be sent to interested parties, including local government officials, community leaders, etc. The mailers provide a brief summary of the response actions planned at each site and inform interested parties that a public meeting will be held to discuss the plans. The public meeting will be scheduled at a later date.

4. Each code, please review the proposed plans as follows:

Code OC: Please review the proposed plans for any legal issues. Your review of these plans is concurrent with Ms. Patricia Chalfant, legal counsel of the Engineering Field Activity Chesapeake (EFACHES).

Code PA: Please review the proposed plans from the public's perspective, ensuring that the text is not too complex, yet informative.

Code 09: For the Public Works Department, these proposed plans are more of a heads up of future activities of the Installation Restoration Program. However, institutional controls placed on sites will affect work that can be performed in certain areas of the

**Enclosure 80**  
**Comments on UXO Support Plan**

5090  
Ser 046C/25

base, such as no digging in contaminated areas. We plan to work with your office on these issues in the near future.

Code 042/041: Please review the proposed plans and respond by stating what requirements are necessary to complete the actions, such as obtaining work permits, preparing health and safety plans, obtaining site approvals, etc. Also, if you feel that there are explosive safety issues that need to be addressed, please pass the plans on to Code 041 for their review. For Site 12 - Town Gut Landfill, the work to be done may be within explosive arcs from Building 704 and the LOVA area. Therefore, if this area is within any of these arcs, please inform me of who I would need to coordinate with when this work is performed.

Code 112: Please review the proposed plan for Site 41 - Scrap Yard to determine how the response action will affect your work at the Scrap Yard and respond with these issues so that they can be addressed.

Code 940: The proposed plan for Site 44 - Soak Out Area is just a heads up for you, too. Since no further action is proposed at this site, the existing monitoring wells near building 1182 will be properly abandoned in the future.

5. If you have any questions concerning these matters, please contact me on extension 2263.

  
SHAWN A. JORGENSEN

Distribution:  
OC, PA, 09  
042/041, 112, 940

Copy to:  
04  
046G

Enclosure 80  
Comments on UXO Support Plan

**CD 4 OF 5**

**IH 00496 – 9/1/2000**

Indian Head Division, NSWC April 2002  
POC Shawn Jorgensen (Code 046C)  
jorgensensa@ih.navy.mil

Engineering Field Activity Chesapeake  
Naval Facilities Engineering Command  
Contract Number N62472-90-D-1298  
Contract Task Order 0245  
September 2000

*Why this task order?*

*Why no mention of ordnance materials?*

**CD 4 OF 5**

**IH 00469 – 11/27/00**

Latulippe, George

From: Jorgensen Shawn A IHMD [JorgensenSA@ih.navy.mil]

Sent: Monday, November 27, 2000 1:27 PM

To: George Latulippe (E-mail)

cc: Morgan Heidi A IHMD; Sadorra, Rob; Curtis DeTore (E-mail); Dennis Orenshaw (E-mail)

Subject: COMMENTS ON PROPOSED PLANS FOR SITES 12,41, AND 44

**Enclosure 80**  
**Comments on UXO Support Plan**

00469

**Latulippe, George**

**From:** Jorgensen Shawn A IHMD [JorgensenSA@ih.navy.mil]  
**Sent:** Monday, November 27, 2000 1:27 PM  
**To:** George Latulippe (E-mail)  
**Cc:** Morgan Heidi A IHMD; Sadorra, Rob; Curtis DeTore (E-mail); Dennis Orenshaw (E-mail)  
**Subject:** COMMENTS ON PROPOSED PLANS FOR SITES 12, 41, AND 44



Comments from 04 on  
Site 12 dr...



Comments from 04 on  
Site 41 dr...

George,

Enclosed are my final comments on the draft final proposed plans for Sites 12 and 41. I have no further comments on Site 44. Please note that these comments come from our Safety Office (both Explosives Engineering Safety and OSH). Therefore, a majority (if not all) of the comments will apply to the Remedial Action Contractor (RAC) and do not require changes to the document.

I am uncertain why our Safety personnel feel that there is a potential for "non-inert" items to be located in the Scrap Yard. However, as stated in the comments, we plan to address this before our cleanup work takes place. But, we should probably have an EOD person on-site during the cleanup just in case.

<<Comments from 04 on Site 12 draft final proposed plan.doc>> <<Comments from 04 on Site 41 draft final proposed plan.doc>>

Please note that on 27 October 2000 I sent you the comments I received from our legal counsel on these documents. If you have any questions, please let me know.

V/R,  
Shawn Jorgensen  
Indian Head Division  
Naval Surface Warfare Center  
ATTN: Code 046C, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
Phone - (301) 744-2263  
Fax - (301) 744-4180  
Email - jorgensensa@ih.navy.mil

**Enclosure 80**  
**Comments on UXO Support Plan**

**Morris, Jeffrey W (EFACHES)**

---

**From:** Jorgensen Shawn A IHMD [JorgensenSA@ih.navy.mil]  
**Sent:** Wednesday, October 02, 2002 10:28 AM  
**To:** Dan Pringle (E-mail)  
**Cc:** Jeff Morris (E-mail); James Frank IHMD  
**Subject:** REVIEW OF SITE 41 WORK PLAN

Dan,

I have reviewed the Draft Work Plan for the Remedial (should be Removal) Action at Site 41 - Scrap Yard and one comment (other than the one in parentheses above):

1) Appendix B, Environmental Protection/Pollution Prevention Plan, page i, Table of Contents for Section 1.2. The title should be "REMEDIATION ACTIVITIES" rather than "LANDFILL CLOSURE ACTIVITIES".

I have reviewed the Draft UXO Support Plan and have two comments:

1) Appendix A, page A-5, third line on page. Should "HBX" be "HMX"?  
2) Appendix B, page B-3, first bullet, second line. What are "P2" and "C"?  
Also, all hazardous waste manifests must be signed by our Property Disposal Officer. His name is Joe Minter and he is located in Building 266.

One last note: Frank James of our Safety Department is reviewing the documents, as well. I asked him to pay particular attention to the Draft UXO Support Plan. I hope to have his comments before the end of the week.

Sincerely,  
Shawn Jorgensen  
Indian Head Division  
Naval Surface Warfare Center  
ATTN: Code 044SJ, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
Phone - (301) 744-2263  
Fax - (301) 744-4180  
Pager - (301) 743-1864  
(can be paged through [www.arch.com](http://www.arch.com) <<http://www.arch.com/>> )  
Email - jorgensensa@ih.navy.mil

**Enclosure 80**  
**Comments on UXO Support Plan**

1

Navy RPM Comments on  
Draft UXO Support Plan  
Site 41 – Scrap yard  
Indian Head Division  
Naval Surface Warfare Center  
October 7, 2002

<u>Page</u>	<u>Comment</u>
Cover	The correct address for EFACHES is:  Department of the Navy Engineering Field Activity Chesapeake 1314 Harwood ST SE Washington Navy Yard DC 20374-5018
3-3	Sections 3.4.2.2 may be and 3.4.2.3 will be trip points for the formal process and would need to be revised if this is the case. I've asked NOSA for guidance.
A-1	Section 3.0 states that non-hazardous OE will be heat-treated by the IHDIV SWR facility. Does the Base offer this treatment?  Minor editorial – change “it” to “they” and “contain” to “contained” in the sixth sentence.
A-2	Section 4.2, minor editorial – change “are” to “is” in the first sentence of the second paragraph.
A-7	Section 4.2.3 may not apply to this plan.
A-8	Correct the spelling of “pelletized” in the middle of the page; it should be “palletized”.

**Enclosure 80**  
**Comments on UXO Support Plan**

1

***Response to Comments  
Draft UXO Support Plan  
Site 41 - Scrap Yard  
Indian Head Division - Naval Surface Warfare Center  
Indian Head, Maryland***

**Navy RPM Comments**

**Comment 1:** The correct address for EFACHES is:

Department of the Navy  
Engineering Field Activity Chesapeake  
1314 Harwood St. SE  
Washington Navy Yard DC 20374-5018

*Response:* The address will be corrected.

**Comment 2:** Page 3-3. Sections 3.4.2.2 may be and 3.4.2.3 will be trip points for the formal process and would need to be revised if this is the case. I've asked NOSA for guidance.

*Response:* Comment noted.

**Comment 3:** Page A-1..Section 3.0 states that non-hazardous OE will be heat-treated by the IHDIV SWR facility. Does the Base offer this treatment?

Minor editorial – change “it” to “they” and “contain” to contained” in the sixth sentence.

*Response:* The base does offer heat treatment.

“it” will be changed to “the item” and “contain” will be changed to “contained”.

**Comment 4:** Page A-2. Section 4.2, minor editorial – change “are” to “is” in the first sentence of the second paragraph.

1

**Enclosure 80**  
**Comments on UXO Support Plan**

I

*Response: The text will be changed accordingly.*

**Comment 5: Page A-7. Section 4.2.3 may not apply to this plan.**

*Response: Comment noted. The intent of the paragraph is to show that Shaw E&I will not be accessing non-inert items.*

**Comment 6: Page A-8. Correct the spelling of "pelletized" in the middle of the page; it should be "palletized".**

*Response: The spelling will be corrected.*



**Enclosure 80**  
**Comments on UXO Support Plan**

**Morris, Jeffrey W (EFACHES)**

---

**From:** Morris, Jeffrey W (EFACHES)  
**Sent:** Wednesday, October 16, 2002 8:43 AM  
**To:** 'Pringle, Daniel'  
**Cc:** Rail, Joseph P (EFACHES); 'Dennis Orenshaw'; 'DeTore, Curtis'; 'George Latulippe'; 'Jorgensen Shawn'  
**Subject:** Draft Site 41 RAC Work Plan - Navy RPM Comments  
**Importance:** High

Dan,

Here are my few comments on the draft work plan:

**General**

The EFACHES address that appears on the cover pages should be changed to

Department of the Navy  
Engineering Field Activity Chesapeake  
1314 Harwood ST SE  
Washington Navy Yard DC 20374-5018

**Page**

- 3-4 3.3.7 - Where will the soil for the temporary barrier come from? Is soil the best material for this purpose?  
3.5 - Is it necessary to send the chipped vegetation off site for disposal or may it be disposed of on Base?  
3.6 - Has the Base removed enough of the large items (i.e. transformers) to permit work?  
3-5 3.8 - This section should address the handling of the water, perhaps with a reference to 3.7.  
3-7 3.12.3 - Will submittal of the survey data in ASCII format support the Base's needs (i.e. GIS)?

**Figure**

- 3-1 This schedule should include handling of the shapes.

Jeff Morris  
EFA Chesapeake

**Enclosure 80**  
**Comments on UXO Support Plan**

**Navy RPM Comments**

**Comment 1:**     **The EFACHES address that appears on the cover pages should be changed to:**

Department of the Navy  
Engineering Field Activity Chesapeake  
1314 Harwood St SE  
Washington Navy Yard, DC 20374-5018

*Response:*       *The address will be corrected.*

**Comment 2:**     **Page 3-4, Section 3.3.7 – Where will the soil for the temporary barrier come from? Is soil the best material for this purpose?**

*Response:*       *The text will be revised to indicate that the soil for the temporary barrier will come from an off-site source. The temporary soil barrier will be installed in areas where the vertical wall is not intact.*

**Comment 3:**     **Page 3-4, Section 3.5 – Is it necessary to send the chipped vegetation off site for disposal or may it be disposed of on Base?**

*Response:*       *There will be little chipped vegetation generated. The text will be revised to indicate that it may be used in the topsoil layer or below during backfilling.*

**Comment 4:**     **Page 3-4, Section 3.6 – Has the Base removed enough of the large items (i.e. transformers) to permit work?**

*Response:*       *No, there still exists several large items that will need to be removed, such as milling equipment, office trailer tanks, transformer, and rail car.*

**Comment 5:**     **Page 3-5, Section 3.8 – This section should address the handling of the water, perhaps with a reference to 3.7.**

*Response:*       *The text will be revised to indicate that the water from the cleaning process will be handled as stated in section 3.7.*

**Comment 6:**     **Page 3-7, Section 3.12.3 – Will submittal of the survey data in ASCII format support the Base's needs (i.e. GIS)?**

*Response:*       *The text will be revised to indicate that electronic copies of the as-built drawings will also be provided in AutoCAD and GIS format.*

**Comment 7:**     **Figure 3-1 – This schedule should include handling of the shapes.**

*Response:*       *The schedule has been revised to include the OE items handling.*

**Enclosure 80**  
**Comments on UXO Support Plan**

**COMMENTS ON REVISED UXO SUPPORT PLAN REMEDIAL ACTION FOR  
SITE 41 – SCRAP YARD of October 21, 2002**

Comments from Dave Bode, Explosive Safety Division Director  
22 October 2002

**Page   Comment**

- 2-1    Section 2.0, first line. Please clarify who the “site workers” are that are mentioned in this paragraph.
- 3-1    Section 3.0, fourth line. Please change “stages” to “staged”.
- 3-1    Section 3.1, first line. What is EP 75-1-2? Is it an internal document?
- 3-3    Section 3.4.2.3. IHDIV-NSWC Safety personnel should set up the Exclusion Zone rather than the contractor. This way, Activity Security personnel can evacuate buildings, close roads, and monitor the Mattawoman Creek, as appropriate.
- A-1    Section 3.0, third line from the end of the paragraph. Please remove “if it never contain energetic materials.” If an item never contained energetic material, it would be designated “0”. However, we will not necessarily be able to tell whether or not an item at the Scrap Yard previously contained energetic material.
- A-2    Section 4.1, last line. Who at the “generating activity” will be assigning the demil code? Typically, for items being treated at the Industrial Waste Processor (IWP), formerly the Solid Waste Recycler (SWR), the generating department designates the code.
- A-7    Section 4.2.3, first paragraph, last line. Who will accomplish the demil procedure? If Dahlgren personnel will be performing the demil, please state in this paragraph.
- A-7    Section 5.0, first paragraph, last line. Please change “update” to “updated”.
- A-8    Section 5.0, second complete paragraph on page. Please change “pelletized” to “palletized”.
- B-2    Section 3.0, first and second complete bullets on page. Please move these bulleted items to the end of page B-3. These items are only required when transporting over public roads.

**Two Comments from Shawn Jorgensen**

Attachment A, page ii. Please remove SWR from the List of Acronyms. When it was the SWR, the Industrial Waste Process (IWP) could only process metals (recyclable). However, the IWP can also process combustibles, which has been permitted by the MDE.

Attachment A, page A-1, Section 3.0, second from last line. Please change “SWR” to “IWP”.

**Enclosure 80**  
**Comments on UXO Support Plan**

**IHDIV - Explosive Safety Division Director Comments**

**Comment 1:**      Page 2-1. Section 2.0, first line. Please clarify who the “site workers” are that are mentioned in this paragraph.

*Response:*        The text will be changed to clarify “site workers”.

**Comment 2:**      Page 3-1. Section 3.0, fourth line. Please change “stages” to “staged”.

*Response:*        The text will be changed accordingly.

**Comment 3:**      Page 3-1. Section 3.1, first line. What is EP 75-1-2? Is it an internal document?

*Response:*        EP 75-1-2 will be further identified as a U.S. Army Engineering and Support Center, Huntsville, Engineering Pamphlet.

**Comment 4:**      Page 3-3. Section 3.4.2.3. IHDIV-NSWC Safety personnel should set up the Exclusion Zone rather than the contractor. This way, Activity Security personnel can evacuate buildings, close roads, and monitor the Mattawoman Creek, as appropriate.

*Response:*        The text will be revised to indicate INDIV-NSWC Safety personnel will set up the Exclusion Zone, rather than the contractor.

**Comment 5:**      Page A-1. Section 3.0, third line from the end of the paragraph. Please remove “if it never contain energetic materials.” If an item never contained energetic material, it would be designated “0”. However, we will not necessarily be able to tell whether or not an item at the Scrap Yard previously contained energetic material.

*Response:*        Since there are munitions in the Scrap Yard such as the training Rockeye bomblet that require demilitarization but never contained HE, recommend retaining this category since it would be considered 5X without heat threatening.

**Enclosure 80**  
**Comments on UXO Support Plan**

1

**Comment 6:** Page A-2. Section 4.1, last line. Who at the “generating activity” will be assigning the demil code? Typically, for items being treated at the Industrial Waste Processor (IWP), formerly the Solid Waste Recycler (SWR), the generating department designates the code.

*Response:* Recommend the Shaw E&I Site UXO Supervisor assign the code along with the designated Base explosive safety representative when completing and signing the DD1348-1A

**Comment 7:** Page A-7. Section 4.2.3, first paragraph, last line. Who will accomplish the demil procedure? If Dahlgren personnel will be performing the demil, please state in this paragraph.

*Response:* The Dahlgren personnel will perform the demil at Dahlgren.

**Comment 8:** Page A-7. Section 5.0, first paragraph, last line. Please change “update” to “updated”.

*Response:* The text will be changed accordingly.

**Comment 9:** Page A-8. Section 5.0, second complete paragraph on page. Please change “pelletized” to “palletized”.

*Response:* The text will be changed accordingly.

**Comment 10:** Page B-2. Section 3.0, first and second complete bullets on page. Please move these bulleted items to the end of page B-3. These items are only required when transporting over public roads.

*Response:* The text will be changed accordingly.

**Comment 11:** A-ii. Please remove SWR from the List of Acronyms. When it was the SWR, the Industrial Waste Process (IWP) could only process metals (recyclable). However, the IWP can also process combustibles, which has been permitted by the MDE.

*Response:* The List of Acronyms will be changed accordingly.

**Enclosure 80**  
**Comments on UXO Support Plan**

00469

**Latulippe, George**

**From:** Jorgensen Shawn A IHMD [JorgensenSA@ih.navy.mil]  
**Sent:** Monday, November 27, 2000 1:27 PM  
**To:** George Latulippe (E-mail)  
**Cc:** Morgan Heidi A IHMD; Sadorra, Rob; Curtis DeTore (E-mail); Dennis Orenshaw (E-mail)  
**Subject:** COMMENTS ON PROPOSED PLANS FOR SITES 12, 41, AND 44



Comments from 04 on  
Site 12 dr...



Comments from 04 on  
Site 41 dr...

George,

Enclosed are my final comments on the draft final proposed plans for Sites 12 and 41. I have no further comments on Site 44. Please note that these comments come from our Safety Office (both Explosives Engineering Safety and OSH). Therefore, a majority (if not all) of the comments will apply to the Remedial Action Contractor (RAC) and do not require changes to the document.

I am uncertain why our Safety personnel feel that there is a potential for "non-inert" items to be located in the Scrap Yard. However, as stated in the comments, we plan to address this before our cleanup work takes place. But, we should probably have an EOD person on-site during the cleanup just in case.

<<Comments from 04 on Site 12 draft final proposed plan.doc>> <<Comments from 04 on Site 41 draft final proposed plan.doc>>

Please note that on 27 October 2000 I sent you the comments I received from our legal counsel on these documents. If you have any questions, please let me know.

V/R,  
Shawn Jorgensen  
Indian Head Division  
Naval Surface Warfare Center  
ATTN: Code 046C, Bldg. D-327  
101 Strauss Avenue  
Indian Head, MD 20640-5035  
Phone - (301) 744-2263  
Fax - (301) 744-4180  
Email - jorgensensa@ih.navy.mil

**Enclosure 80**  
**Comments on UXO Support Plan**

Site 41 Final UXO Plan and Response to Comments

Page 1 of 1

**Jorgensen Shawn A IHMD**

---

**From:** McCahill Sherry M NOSA  
**Sent:** Tuesday, November 05, 2002 12:08 PM  
**To:** Jorgensen Shawn A IHMD  
**Cc:** Klinghoffer Edward M NOSA  
**Subject:** RE: Site 41 Final UXO Plan and Response to Comments

Shawn,

I skimmed the document in question and I did note several explosives safety concerns. In particular, the terms "UXO" and "OE/UXO" are used indiscriminately. It was my understanding that the probability of encountering UXO on the site is low. If so, the contractor should be focusing on inert ordnance or ordnance-related scrap while including procedures to be followed in the event of encountering UXO. Please contact Ed Klinghoffer, X4966, for additional guidance regarding the explosives safety issues associated with this site. But as Ed and I discussed with Jeff, UXO should not be moved or dispositioned by the contractor when their function is limited to "UXO safety support" and the document should clearly reflect that. I'm planning to do a more in-depth review while I'm out but someone else from my office should be available to work with Ed while I'm gone.

Sherry

-----Original Message-----

**From:** Jorgensen Shawn A IHMD  
**Sent:** Friday, October 25, 2002 4:17 PM  
**To:** McCahill Sherry M NOSA  
**Cc:** Klinghoffer Edward M NOSA; Jeff Morris (E-mail)  
**Subject:** FW: Site 41 Final UXO Plan and Response to Comments

Sherry,

Jeff Morris asked me to forward this to you. It is the latest Scrap Yard UXO plan. If you have already looked at the version from last week, you will be happy to know that the Response to Comments contains all of the changes made to that document.  
Shawn

-----Original Message-----

**From:** Pringle, Daniel [mailto:Daniel.Pringle@shawgrp.com]  
**Sent:** Friday, October 25, 2002 2:48 PM  
**To:** 'Jorgensen, Shawn- IH Env.'; 'Gardner, Cathy-IH ROICC Office'; 'Morris, Jeff (IH RPM)'; Mathisen, Tim; Bacon, William; Carriere, Steve M.; Dunn Jr, James A  
**Subject:** Site 41 Final UXO Plan and Response to Comments

<<Scrap Yard UXO Plan.pdf>> <<Response to Comments.pdf>>

**Daniel Pringle**  
**Shaw Environmental, Inc.**  
**2790 Mossdale Blvd.**  
**Monroeville, Pa. 15146**  
**Phone: 412-380-6248**  
**Fax: 412-858-3979**  
**Daniel.Pringle@Shawgrp.com**

12/13/2002

**Enclosure 80**  
**Comments on UXO Support Plan**

***Response to Comments***  
***Draft Work Plan***  
***Remedial Action***  
***Site 41 – Scrap Yard***  
***Indian Head, Maryland***

**Indian Head Division – Naval Surface Warfare Center Comments**

**Comment 1:** The title – “The Draft Work Plan for the Remedial Action at Site 41 – Scrap Yard” – ‘Remedial’ should be changed to ‘Removal’.

*Response:* The title will be corrected.

**Comment 2:** Appendix B – Environmental Protection/Pollution Prevention Plan, page i, Table of Contents for Section 1.2 – the title should be changed from “LANDFILL CLOSURE ACTIVITIES” to “REMEDIATION ACTIVITIES”.

*Response:* The title will be corrected.

**Draft UXO Support Plan**

**Comment 3:** Appendix A, page A-5, third line on the page – Should “HBX” be “HMX”?

*Response:* The Final UXO Support Plan has been previously submitted.

**Comment 4:** Appendix B, page B-3, first bullet, second line – What are “P2” and “C”?

*Response:* The Final UXO Support Plan has been previously submitted.

**Comment 5:** All hazardous waste manifests must be signed by our Property Disposal Officer, Joe Minter. He is located in building 266.

*Response:* Comment noted.



**Enclosure 80**  
**Comments on UXO Support Plan**

1

**Morris, Jeffrey W (EFACHES)**

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**From:** Jorgensen Shawn A IHMD [JorgensenSA@ih.navy.mil]  
**Sent:** Friday, November 08, 2002 1:20 PM  
**To:** Morris, Jeffrey W (EFACHES)  
**Cc:** Dan Pringle (E-mail); William Bacon (E-mail)  
**Subject:** FW: NEED YOUR HELP

Jeff,

Below is the final word from our Explosive Safety Division Director.

In my opinion, based on this information, we should leave the UXO plan as it is, i.e., only call Dahlgren if something is found that is potentially explosive that cannot be moved.

I am forwarding this to Dan Pringle and Bill Bacon. If for some reason you do not agree, then please let them know.

Thanks,  
Shawn

> -----Original Message-----

> From: Bode David A IHMD  
> Sent: Friday, November 08, 2002 9:46 AM  
> To: Jorgensen Shawn A IHMD  
> Cc: Bohli William H IHMD; Deskins Cheryl L (Sherry) IHMD  
> Subject: RE: NEED YOUR HELP

>  
> Shawn,

>  
> The remediation that is being conducted at the scrap yard is environmental  
> and not explosive. We do not know that any explosive contamination exists  
> at the site. In fact we are relatively sure that none of the items are  
> live but we are going the extra mile to ensure the public is protected.  
> If we encounter an explosive item or an item that we cannot determine to  
> be inert then we will deal with it just like we do any suspect item that  
> we encounter while performing an operation. We will deal with the  
> specific item. We have encountered suspect/explosive items during other  
> operations for example the CBIRF parking lot construction.

>  
> Mike Olup (Indian Head) discussed this philosophy with Ed Klinghoffer  
> (NOSSA) and they agreed that a remediation plan was not necessary for the  
> scrap yard clean up.

>  
> David A. Bode  
> Code 041 (Acting)  
> (301) 744-4384 (Voice)  
> (301) 744-6533 (Fax)  
> (301) 743-1914 (pager)/ plus text messages via <http://www.arch.com/message>  
> Indian Head Division, NSWC

>  
>  
> -----Original Message-----

> From: Jorgensen Shawn A IHMD  
> Sent: Wednesday, November 06, 2002 12:52 PM  
> To: Bode David A IHMD

1

**Enclosure 80**  
**Comments on UXO Support Plan**

> Subject: NEED YOUR HELP  
> Importance: High  
>  
> Dave,  
>  
> I need your help concerning the Scrap Yard cleanup. In your  
> opinion, do we need to prepare an Explosive Safety Remediation Plan, as  
> described in OP 5, Page 2-20, Section 2-1.14.21?  
>  
> Sorry to ask for an answer as quickly as possible, but this is  
> rather urgent, since we hope to begin work on 12 November 2002 (next  
> week). If we have to prepare a plan, the requirements of what goes in the  
> plan (shown in OP 5, Page 2-22, Table 2-2) will take us a while to get  
> together. Then we will need to get approval from NOSSA and possibly the  
> DDESB.  
>  
> Thanks in advance for any help you can provide!  
> Shawn Jorgensen  
> Indian Head Division  
> Naval Surface Warfare Center  
> ATTN: Code 044SJ, Bldg. D-327  
> 101 Strauss Avenue  
> Indian Head, MD 20640-5035  
> Phone - (301) 744-2263  
> Fax - (301) 744-4180  
> Pager - (301) 743-1864  
> (can be paged through [www.arch.com](http://www.arch.com) <<http://www.arch.com>>)  
> Email - [jorgensensa@ih.navy.mil](mailto:jorgensensa@ih.navy.mil)  
>

## Enclosure 81 Instruction 4570.2G



DEPARTMENT OF THE NAVY  
INDIAN HEAD DIVISION  
NAVAL SURFACE WARFARE CENTER  
101 STRAUSS AVE  
INDIAN HEAD MD 20640-5035

IHDIVNAVSURFWARCENINST 4570.2G  
Code: 20

04 MAR 2007

### IHDIVNAVSURFWARCEN INSTRUCTION 4570.2G

From: Commander

Subj: PROCEDURES FOR DISPOSAL OR DECONTAMINATION OF MINUTELY  
PROPELLANT, EXPLOSIVE, OR PYROTECHNIC (PEP)  
CONTAMINATED WASTE, SCRAP METAL, EQUIPMENT, OR OTHER  
MATERIAL

Ref: (a) 40 CFR 261.30 through 261.33  
(b) COMAR 26.13  
(c) DoD 4160.21-M-1, Defense Demilitarization Manual  
(d) DoD 4160.21-M, Defense Material Disposition  
Manual

Encl: (1) Industrial Waste Processor/Caffee Road Thermal  
Treatment Point Log Sheet (Blank Copy)  
(2) Industrial Waste Processor/Caffee Road Thermal  
Treatment Point Log Sheet (Sample)  
(3) Explosive Decontamination Tag, NAVORDSTA 4035-29  
Rev. 11-69  
(4) DD Form 1348-1A, DoD Single Line Item Release/  
Receipt Document  
(5) Refrigerant Free Sticker

1. **Purpose.** This instruction establishes procedures for disposal or decontamination of minutely PEP contaminated waste, scrap metal, equipment, or other material.

2. **Cancellation.** This instruction cancels IHDIVNAVSURFWARCEN INSTRUCTION 4570.2F. Changes are not indicated due to major revision.

3. **Definition.** Minutely PEP contaminated material is material that has been exposed to PEPs in such a manner that it has the potential to exhibit characteristics of reactivity yet no visible or significant PEP contamination is known to be present. This is material that essentially looks uncontaminated yet it

## **Enclosure 81 Instruction 4570.2G**

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cannot be certified inert. Material with visible or known significant PEP contamination that is obviously or probably reactive shall be considered greater than minutely contaminated. This material must be cleaned of the visible PEP contamination before it can be considered minutely contaminated. Items with visible PEP contamination, or items with areas which cannot be visually inspected may not be decontaminated at the Industrial Waste Processor (IWP) or thermally treated at the Caffee Road Thermal Treatment Point (CRTTP).

4. **Material not covered by this instruction.** Disposal or decontamination of material that is considered more than minutely PEP contaminated or that is considered non-PEP contaminated is not covered by this instruction.

a. **Explosive hazardous waste shall be disposed of at the SATTP (Strauss Avenue Thermal Treatment Point).** Hazardous waste is a waste which exhibits characteristics of ignitability, corrosivity, reactivity, or Toxicity Characteristic Leaching Procedure (TCLP) toxicity or is specifically listed in references (a), (b), or (c). Generators of explosive hazardous waste shall contact extension 1881 for disposal instructions or the Safety Department for direction.

b. **Controlled waste such as refrigerant and hydraulic oil shall be removed from material prior to delivery to the IWP and CRTTP facilities.** Contact extension 4591 for direction.

c. **Unfired or Potentially Explosive items are not to be sent to either the IWP or CRTTP facilities.** These items must receive primary treatment at the Strauss Avenue Burn Thermal Treatment Point or by some other Safety approved method before final decontamination or treatment at the IWP or CRTTP facilities. Generators of these materials shall contact extension 1881 for disposal instructions or the Safety Department for direction.

d. **Material that has not been downloaded are not to be sent to either IWP or CRTTP facilities.** Material must be downloaded to allow internal inspection. Do not send sealed or closed containers to the IWP or CRTTP.

5. **Documentation.** All required paperwork must be properly completed and submitted prior to scheduling/treatment of material. Paperwork is submitted to Code 2130I in Building 714.

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a. All material delivered to the IWP and CRTTP facilities shall be accompanied by a log sheet, enclosure (1) filled out by the generator. A sample log sheet is provided, enclosure (2). An Explosive Decontamination Tag, NAVORDSTA 4035-29 Rev. 11-69, enclosure (3) issued by a Safety Department Inspector must also accompany the material. Operating permits for the IWP and CRTTP facilities require yearly reporting to the MDE (Maryland Department of the Environment) of quantity and type of waste processed. Generators shall fill out log sheets with as much information as available to facilitate reporting requirements. Exact quantities of material are not necessarily required but types of hardware should be specified when known (example: one dumpster load of MK 66 2.75" Rocket Motor Tubes). The contamination shall also be specified when known (example: contaminated with double base propellant). All material delivered to the IWP and CRTTP facilities shall be accompanied by a red tag issued by a Safety Department inspector. To obtain a red tag, contact the Safety Department on extension 4282. Safety Department inspectors will perform a cursory inspection of the material to verify it is acceptable for processing at the IWP or CRTTP facilities but generators shall note that this inspection is not detailed. It is the Generator's responsibility to ensure only acceptable materials are delivered to these facilities.

b. Plant Account Equipment and Munitions List Items (MLIs) delivered to the IWP and CRTTP facilities for disposal shall be accompanied by a completed DD Form 1348-1A, enclosure (4). To maintain accountability, plant account equipment and MLIs must be transferred to the Property Disposal Officer (Code PDO) following decontamination at the IWP or CRTTP facilities. The DD Form 1348-1A for this material shall be prepared by the generator prior to delivery of the items to the IWP and CRTTP facilities. The DD Form 1348-1A shall at a minimum contain the following information:

- Block 2: The originating department or person authorizing disposal of the item (usually the generator).
- Block 3: Defense Reutilization and Marketing Office, P.O. Box 388, Ft. Meade, MD 20755-0388.
- Block 25: A description of the item with the property identification number for plant account equipment or item nomenclature and National Stock Number for MLIs.
- Columns 23-24: The unit of issue (each, box, pound, etc.).

## **Enclosure 81 Instruction 4570.2G**

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- Columns 25-29: The number of units or total estimated weight.
- Columns 57-59: Identification of the item as an MLI or non-MLI. Specify the demilitarization code per references (c) and (d) for MLIs.

c. **MLIs (Munition List Items) have specific demilitarization and disposal requirements.** MLIs shall be delivered to the IWP segregated from other types of scrap metal. MLIs shall be accompanied by a DD Form 1348-1A in addition to the log sheet and Explosive Decontamination Tag. The generator shall specify the NSN (National Stock Number) or manufacturer's part number for all MLIs in block 25 of DD Form 1348-1A. The generator shall specify the demilitarization code in columns 57-59 of DD Form 1348-1A, as shown below, specific to each MLI as required by references (c) and (d).

CODE	DEFINITION
A	Non-MLI Non-DEMIL
B	MLI Non-DEMIL
C	MLI unless key points or lethal parts, components, and accessories per DEMIL Manual, have been removed
D	MLI DEMIL by mutilation (make unfit for intended purpose by melting, cutting, tearing, scratching, crushing, breaking, punching, neutralizing, etc.)
E	MLI DEMIL by turning, shredding, or pulping
F	MLI DEMIL instruction to be furnished by inventory manager
G	MLI DEMIL prior to physical transfer to DPDO (Normally limited to ammunition, explosives, and other dangerous articles (AEDA))

## **Enclosure 81 Instruction 4570.2G**

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d. **Controlled waste such as refrigerant and hydraulic oil shall be removed from material prior to delivery to the IWP and CRTTP facilities.** Refrigerant removal certification must be obtained from a Safety Department Inspector prior to delivery to the IWP. Contact extension 4591. When such material is delivered to the IWP or CRTTP, it must be accompanied by a DD Form 1348-1A, enclosure (4) as well as an orange and black "refrigerant free" sticker, enclosure (5) provided by the inspector. This is done by safety. If material delivered to the IWP or CRTTP is not accompanied by these items, it is assumed that the material never contained the controlled waste mentioned above, a fact acknowledged by the generator when they sign the Industrial Waste Processor/Caffee Road Thermal Treatment Point Log Sheet (enclosure (1)).

e. **Additional hazards of material delivered to the IWP and CRTTP facilities shall be identified by the generator on the log sheet.** Waste containing potentially hazardous materials such as asbestos or magnesium must be clearly identified by the generator to ensure operator safety and proper handling. Acceptance of these materials will be handled on a case-by-case basis.

6. **Scheduling.** Delivery of waste shall be scheduled. Generators shall contact IWP or CRTTP operators on extensions 4103 or 1292 to schedule delivery of material. Material cannot be delivered to these facilities when Code 210 personnel are not present to inspect and accept it. These facilities are locked and not accessible when unattended.

7. **Disposal Requirements.** All departments shall turn in minutely PEP contaminated material for disposal or decontamination to Code 210 operations personnel. Decontamination facilities are located at Building 1770 (IWP), and CRTTP. Code 210 Operations personnel shall determine which facility minutely PEP contaminated materials shall be delivered to for processing. All deliveries must be inspected by Code 210 personnel. Generating departments shall schedule all deliveries of material delivered to these facilities with Code 210 operations personnel. Material shall not be delivered to these facilities when Code 210 personnel are not present to accept it **as it will not be processed.** Code 210 personnel can be reached on extension 4103 at Building 1770, or extension 1292 at Building 880 to schedule deliveries. All minutely PEP contaminated material delivered to Code 210 for disposal or decontamination at IWP or CRTTP shall meet the following criteria where applicable:

## **Enclosure 81 Instruction 4570.2G**

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a. All material including ordnance hardware delivered to the IWP facility shall be disassembled to allow internal inspection. IWP and CRTTP operators are required to inspect all material prior to decontamination to verify there is no excessive PEP contamination. To facilitate this process, all material, especially ordnance hardware, must be downloaded to allow internal inspection. Do not send sealed or closed containers such as aerosol cans to the IWP facility for treatment. These items cannot be opened for inspection and pose an explosive hazard during treatment. They will not be accepted. Exceptions are small ordnance items such as CADs (cartridge actuated devices) that are known by the generator to be completely expended but cannot practically be disassembled or other larger ordnance items that are known by the generator to be inert, empty, or expended. Generators must provide written certification [branch head signature on enclosure (1)] stating that the material is only "minutely contaminated" for all ordnance items delivered to the IWP and CRTTP facilities that are not downloaded. Code 210 personnel shall determine whether or not material may be accepted and processed at the IWP and CRTTP facilities without being disassembled.

b. Only minutely PEP contaminated material shall be delivered to the IWP and CRTTP facilities for disposal or decontamination. These facilities are not permitted to process material with more than minute PEP contamination or material with no contamination. Waste material with more than minute PEP contamination shall be cleaned of the excessive contamination to make it minute or it shall be managed as an explosive hazardous waste.

c. Metallic and combustible material shall be segregated when delivered to the IWP and CRTTP facilities. Scrap metal, combustible waste, excess equipment, and ordnance hardware require different decontamination and disposal procedures and must already be segregated when delivered to facilitate the IWP and CRTTP operations. It is recommended that waste generators accumulate these materials separately to maintain accountability and minimize handling. Exceptions are items that cannot practically or safely be separated such as case-bonded inhibitor liners on rocket motors or metal lock rings on lever packs. Contact Code 210 personnel for direction if necessary.



## **Enclosure 81 Instruction 4570.2G**

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d. Containers used for accumulation of minutely PEP contaminated materials shall be colored yellow with white labeling as specified in reference (a), Safety Manual, chapter 14, section 14.30.

e. Containers of material delivered to the IWP and CRTTP facilities shall be free of rainwater and other non-permitted types of waste. Waste generators shall maintain security of accumulation containers to prevent infiltration of rainwater and unauthorized dumping. When necessary, disposal of waste water and non PEP contaminated waste shall be completed by the generator prior to delivery of the material to Code 210. Generators may contact the Environmental Division, Code 045, on extension 2255 for direction on disposal of specific waste items.

f. **Capacity per load.** The capacity of the IWP is 7,000 pounds per load with maximum dimensions of 5 feet wide by 4 feet high by 12 feet long. Larger items must be processed at CRTTP.

8. **Responsibilities of minutely PEP contaminated waste generators.** Each department shall ensure the following requirements are adhered to and incorporated in applicable SOPs and operator training.

a. **Security.** It is the responsibility of each generating department to ensure that all dumpsters/containers in their control which are used for the accumulation of minute PEP contaminated items are locked or secured at all times to prevent unauthorized dumping. Items delivered to the IWP which contain improperly classified items will not be accepted. The generator will be responsible for the segregation and/or disposal of these items.

b. **Deliveries.** It is the responsibility of each generating department to contact Code 210 personnel on extensions 4103 or 1292 to arrange delivery of material. Material shall not be delivered unless Code 210 personnel are present to inspect and accept it.

c. **Material.** Only minutely PEP contaminated scrap metal, combustible waste, excess equipment, or ordnance hardware will be accepted at the IWP and CRTTP facilities. The only materials that will be accepted at the CRTTP is material that is too large for the IWP. Hazardous waste shall not be processed.

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9. Post-Treatment. Material is sent to the Property Disposal Office after it has been decontaminated and certified inert by Code 210 personnel. If the generator wishes to have material returned after decontamination, Code 210 personnel must be notified prior to delivery. This fact should be noted on the Industrial Waste Processor/Caffee Road Thermal Treatment Point Log Sheet, enclosure (1).



MARC A. SIEDBAND

Distribution:  
Network Information System (NIS)

## Enclosure 81 Instruction 4570.2G

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Code: 20

### INDUSTRIAL WASTE PROCESSOR/CAFFEE ROAD THERMAL TREATMENT POINT LOG SHEET

GENERATOR: \_\_\_\_\_

LOCATION OF COLLECTION SITE: \_\_\_\_\_

DATE OF DELIVERY TO IWP \_\_\_\_\_ or DATE OF DELIVERY TO CTRTP \_\_\_\_\_

TYPE OF CONTAINER: \_\_\_\_\_

I \_\_\_\_\_ (branch head signature) certify that this material which is not downgraded is minutely contaminated.

#### DESCRIPTION OF CONTENTS

ITEM/MATERIAL	QUANTITY	TYPE OF PEP	TOTAL WEIGHT

Demilitarization Required: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

#### NOTES:

1. Only scrap metal, combustible waste, excess equipment, and ordnance hardware will be accepted at the IWP and CTRTP facilities. The only materials that will be accepted at the CTRTP is material that is too large for the IWP, and material that cannot be internally inspected. The IWP at Building 1770 is 7,000 pounds per load with maximum dimensions of 5' wide by 4' high by 12' long. Hazardous waste shall not be processed.
2. It is the responsibility of each generating department to contact Code 210 personnel on extensions 4103 or 1292 to arrange delivery of material. Material shall not be delivered unless Code 210 personnel are present to inspect and accept it.
3. Scrap metal, combustible waste, excess equipment, and ordnance hardware require different decontamination and disposal procedures and must **already be segregated** when delivered to facilitate the IWP and CTRTP operations. These materials should be stored in yellow/white containers.
4. MLI's, Plant Account Equipment, and DIPEC equipment must be accompanied by a completed DD Form 1348-1.
5. Demilitarization is usually required for Munitions List Items (MLI's) or any item which may be reusable in a dangerous form. Ensure MLI's are segregated from non-MLI's before delivery to the IWP.

SIGNATURE OF GENERATOR: \_\_\_\_\_

Enclosure (1)

## Enclosure 81 Instruction 4570.2G

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Code: 20

### INDUSTRIAL WASTE PROCESSOR/CAFFEE ROAD THERMAL TREATMENT POINT LOG SHEET

GENERATOR: Authorizing Organization Representative, Code

LOCATION OF COLLECTION SITE: Building where waste collected

DATE OF DELIVERY TO IWP \_\_\_\_\_ or DATE OF DELIVERY TO CTRTP \_\_\_\_\_

TYPE OF CONTAINER: \_\_\_\_\_

I \_\_\_\_\_ (branch head signature) certify that this material which is not downloaded is minutely contaminated.

#### DESCRIPTION OF CONTENTS

ITEM/MATERIAL	QUANTITY	TYPE OF PEP	TOTAL WEIGHT
Lever Paks	4	1.1 HMX	60 lbs.

Demilitarization Required: \_\_\_\_\_

COMMENTS: The Generator should list any special precautions/instructions or treatment requirements for operations.

#### NOTES:

1. Only scrap metal, combustible waste, excess equipment, and ordnance hardware will be accepted at the IWP and CRTTP facilities. The only materials that will be accepted at the CRTTP is material that is too large for the IWP, and material that cannot be internally inspected. The IWP at Building 1770 is 7,000 pounds per load with maximum dimensions of 5' wide by 4' high by 12' long. Hazardous waste shall not be processed.
2. It is the responsibility of each generating department to contact Code 210 personnel on extensions 4103 or 1292 to arrange delivery of material. Material shall not be delivered unless Code 210 personnel are present to inspect and accept it.
3. Scrap metal, combustible waste, excess equipment, and ordnance hardware require different decontamination and disposal procedures and must **already be segregated** when delivered to facilitate the IWP and CRTTP operations. These materials should be stored in yellow/white containers.
4. MLI's, Plant Account Equipment, and DIPEC equipment must be accompanied by a completed DD Form 1348-1.
5. Demilitarization is usually required for Munitions List Items (MLI's) or any item which may be reusable in a dangerous form. Ensure MLI's are segregated from non-MLI's before delivery to the IWP.

SIGNATURE OF GENERATOR: \_\_\_\_\_

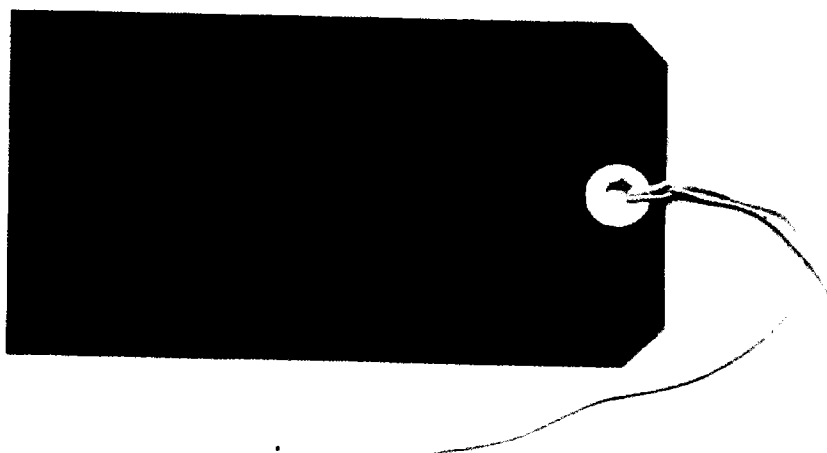
Enclosure (2)

**Enclosure 81 Instruction 4570.2G**

NAVSURFWARCENINST 4570.2G  
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EXPLOSIVES DECONTAMINATION TAG  
NAVORDSTA 4035/29 (REV. 11-69)



Enclosure (3)

## Enclosure 81 Instruction 4570.2G

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NAVSURFWARCENINST 4570.2G  
Code: 20

### DoD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT DD FORM 1348-1A

Example:

1. TOTAL PRICE		2. SHIP FROM		3. SHIP TO	
UNIT PRICE		DOLLARS		CITY	
DOLLARS		CITY		CITY	
4. MARK FOR					
5. DIS DATE		6. INQD		7. PAY DATE	
8. TYPE ORGANO		9. PS		10. PS	
11. CITY, STATE		12. CITY, STATE		13. CITY, STATE	
14. CITY, STATE		15. CITY, STATE		16. CITY, STATE	
17. FROM NOMENCLATURE					
18. FROM NOMENCLATURE					
19. TYPE		20. NO CONT		21. TOTAL WEIGHT	
22. RECEIVED BY		23. DATE RECEIVED		24. DATE RECEIVED	

When delivering minute PEP contaminated items to the IWP or CRTP, a DD Form 1348-1A must accompany all items specified in paragraph 5h of IHDIVNAVSURFWARCEN INST. 4570.2G. As a minimum, the form shall contain the following information.

1. Block 2: The originating department or person authorizing disposal of the item (usually the generator).
2. Block 3: Defense Reutilization and Marketing Office, P.O. Box 388, Ft. Meade, MD 20755-0388.
3. Block 25: A description of the item with the property identification number for plant account equipment or item nomenclature and National Stock Number for MLIs.
4. Columns 23-24: The unit of issue (each, box, pound, etc.).
5. Columns 25-29: The number of units or total estimated weight.
6. Columns 57-59: Identification of the item as an MLI or non-MLI. Specify the demilitarization code per references (c) and (d) for MLIs.

Enclosure (4)

**Enclosure 81 Instruction 4570.2G**

NAVSURFWARCENINST 4570.2G  
Code: 20

04 MAR 2002

REFRIGERANT FREE STICKER



Enclosure (5)

**Enclosure 83.**  
**Email from Randy Johnson to Craig Smith: Subject**  
**Projectile Burst Strength**

**Smith Thomas C (Craig) IHMD**

---

**From:** Johnson [johnsonrt@ih.navy.mil]  
**Sent:** Wednesday, January 08, 2003 12:01 PM  
**To:** Craig Smith  
**Subject:** 4"/50 Projectile Burst



I started the analysis by scaling the projectile dimensions off the sketch in the description you provided; while not very accurate, it is adequate for this analysis. I then assumed the material is a (relatively weak) structural steel and calculated the pressure at which the Von Mises (total) stress equals the ultimate tensile strength of the material. This point came at an internal pressure of 7393 psi.

To answer the question of whether the failure pressure could be generated by heating the air in the cavity, I simply used the relation  $P_1/T_1 = P_2/T_2$  (Charles' Law). For  $P_1$ , I used 14.7 psi, for  $T_1$ , I used 50°F and for  $T_2$ , I used the flame temperature of the torch, 5200°F. This calculation yields  $P_2 = 163.3$  psi, over an order of magnitude less than the calculated burst pressure.

The spread sheet I used is enclosed.

Let me know if you need any more explanation.

-----  
Randy Johnson  
Code 4410C  
Indian Head Division, Naval Surface Warfare Center  
101 Strauss Avenue  
Indian Head, Maryland 20640-1542  
e-mail: johnsonrt@ih.navy.mil  
Phone: (301)744-1468  
FAX: (301)744-6698  
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**Enclosure 83.**  
**Email from Randy Johnson to Craig Smith: Subject**  
**Projectile Burst Strength**

vessel internal diameter (in)	2.680	1/8/03				
b (inner radius)	1.340		Torch Flame Temp.	5200	2871	3144
wall on tube (in)	0.430		Starting Temp.	50	10	283
OD of tube (in)	3.540					
a (outer radius) (in)	1.770					
Design max pressure (psi)	7393		Pressure (psi)	14.70		
			Pressure at temp (psi)	163.3		
<b>Material Properties</b>						
Ultimate strength (psi)	30000					
Yield Str. (psi)	15000					
E =	28.5E+06					
Poisson's Ratio	0.27					
values for r =	1.340	1.770				
s1 = qb2/(a2-b2)	9926	9926				
s2 = qb2(a2 + r2)/(r2(a2-b2))	27245	19852				
s3 = -qb2(a2-r2)/(r2(a2-b2))	-7393	0				
von						
mises = ((s1+s2)/2 + (s2+s3)/2 + (s3+s1)/2)/(1/2)	29997	17193				
Da = qa/E*b2(2-n)/(a2-b2)	0.0011					
Db = qb/E*(a2(1+n) + b2(1-2n))/(a2-b2)	0.0012					
Yield factor of safety	0.500	0.872				
Ultimate factor of safety	1.000	1.745				
<b>Flat Plate Bending Stress</b>						
	Steel-- Blank plate	Steel-- Hole in plate				
k =	0.75	0.73				
r =	1.340	1.340				
t =	0.875	0.875				
w =	7393	7393				
Sm =	13003	12657				
FS	1.154	1.185				
k1 =	0.171	0.176				
Ym =	0.0002	0.0002				
Yield factor of safety	1.154	1.185				
Ultimate factor of safety	2.307	2.370				

**Enclosure 84**  
**Memo 8030 Ser 4210K/2 Dated 09 Jan 03**

8030  
ser 4210K/2  
9 Jan 2003

MEMORANDUM

From: 4210K  
To: 420

Subj: RESULTS OF 4"/50 PROJECTILE RESIDUAL MATERIAL COMBUSTION  
ANALYSES

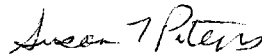
1. In support of the investigation into the 4"/50 projectile incident, I performed a number of analyses to examine the pressure which could be generated inside a 4"/50 projectile under a variety of scenarios.
2. The values used in the calculations were based upon the information that the projectile cavity when filled with TNT held 1.39 pounds of that material, that the burst pressure of the projectile body is 7200 psi and that the temperature of the torch flame is 5200 °F.
3. The volume of the cavity was calculated by looking up the density of TNT which is 1.654 g/cc, then dividing the weight of the TNT by the density to yield a volume of 381 cc.
4. A check was made of the pressure to be expected had the cavity been filled with air that was heated by the cutting torch to 5200 °F (3144 K). From the ideal gas law we know that at constant volume, the pressure is directly proportional to the *absolute* temperature. Assuming that the initial conditions were 25 °C and 1 atmosphere, the pressure at 3144K would be 10.5 atmospheres or 155 psi. Clearly, simply heating the air did not cause the projectile to burst.
5. The projectile was originally filled with TNT and some black powder. Calculations were run to determine how much of each of these energetic materials would need to burn in the 381 cc closed volume to generate the 7200 psi (50 MPa) bursting pressure. The Cheetah code was used for these calculations, using the virial equation of state and the Blake library. These were selected because the pressure was a bit high for accurate predictions with the ideal gas law, but considerably too low for those gaseous equations of state suitable for detonations. Calculations were run at varying loading densities (the mass of energetic material unit of available volume) to determine the approximate loading density to yield 50 MPa.
6. For black powder, whose combustion products are about half solids, a loading density between 0.16 and 0.17 g/cc would yield 50 MPa. This corresponds to 61 grams of black powder in the projectile body, probably significantly more that would have originally been in the loaded projectile.

**Enclosure 84**  
**Memo 8030 Ser 4210K/2 Dated 09 Jan 03**

Subj: RESULTS OF 4"/50 PROJECTILE RESIDUAL MATERIAL COMBUSTION  
ANALYSES

7. For TNT, the loading density required to yield the bursting pressure was 0.05 g/cc,  
for a total of 19 grams of residual TNT in the projectile.

8. For further questions on these analyses, contact Susan Peters, 4210K,  
301.744.4574.



SUSAN T. PETERS

**Enclosure 85**  
**Email from Susan Peters**

**Smith Thomas C (Craig) IHMD**

---

**From:** Peters Susan T IHMD  
**Sent:** Friday, January 10, 2003 8:14 AM  
**To:** Smith Thomas C (Craig) IHMD  
**Subject:** TNT and BP properties

Craig,

TNT under heating will melt at 82 C and decompose explosively at 240 C (from the 53rd edition of the CRC handbook of chemistry and physics). The NIMIC Energetic Materials Compendium Version 1.07 shows that under confinement as in slow cook-off, an overpressure burst will occur at a lower temperature of 190 C. From that same compendium, the critical pressure, i.e., the pressure needed to cause TNT to detonate, is 22.3 gigapascals or over 3 million pounds per square inch. The reference cited for the data in the compendium is T. L. Spivak, Metal Accelerating Explosives for IM Applications", Mar 90.

From Jim Rose's IHTR 433, Investigation of Black Powder and Charcoal, 1975, a range of ignition temperatures is found between 260 and 280 C depending upon the exact composition of the black powder.

Susan T. Peters  
NSWC/IHD  
1.301.744.4574

# Enclosure 86

## TM 9-1300-203 Department of the Army Technical Manual

TM 9-1300-203

the tracer burns for a minimum of 3 seconds. The projectile penetrates the target solely by kinetic energy.

### d. Tabulated Data.

#### (1) Characteristics.

Complete round:  
Weight (lb) ..... 43.91  
Length (in.) ..... 37.11

#### (2) Ballistics.

Muzzle velocity (fps) ..... 3,000  
Maximum range (yd) ..... 23,000

#### (3) Components.

Cartridge case ..... M108, M108B1  
Propellant (8.6 lb) ..... M17 or M30  
Primer ..... M58  
Tracer ..... M5A2, M5A2B1, M18

e. *Packing Data.* One round per fiber container; two containers per wooden box.

### 2-70. Cartridge, 90 Millimeter: AP-T, M318A1C (T33E7) MV2,800

a. *General.* This cartridge (fig. 2-37) is used against armored materiel.

b. *Description.* This cartridge is similar to 90-mm cartridge M318 in paragraph 2-69 above, except for the attachment of windshield and tracer. The projectile is an uncapped monobloc shot to which an aluminum windshield is cemented.

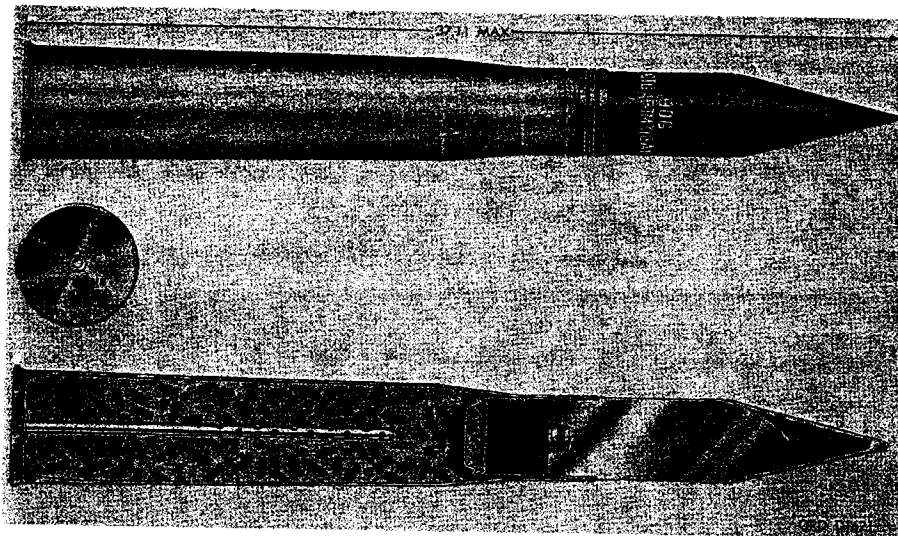


Figure 2-37. 90-mm AP-T cartridge M318A1C.

c. *Functioning.* During the projectile's flight, the tracer burns for a minimum of 3 seconds. The projectile penetrates the target solely by kinetic energy.

### d. Tabulated Data.

#### (1) Characteristics.

Complete round:  
Weight (lb) ..... 44.20  
Length (in.) ..... 37.11

#### (2) Ballistics.

Muzzle velocity (fps) ..... 2,800  
Maximum range (yd) ..... 21,400

#### (3) Components.

Cartridge case ..... M19, M19B1  
Propellant (8.6 lb) ..... M6  
Primer ..... M49 (T33)  
Tracer ..... M5A2B1, M5A2

2-63

## Enclosure 87 Comparative Analysis

For FOF 150

**COMPAIRIATIVE ANALYSIS  
OXO SUPPORT PLAN REMEDIAL ACTION FOR SITE 41-SCRAP YARD  
INDIAN HEAD DIVISION-NAVAL SURFACE WARFARE CENTER  
INDIAN HEAD, MARYLAND**

**CONTRACT NO. N62470-97-D-5000  
TASK ORDER 077**

Ref: (a) UXO Support Plan

Ref: (b) NAVSEA Instruction 8023.11 (STANDARD OPERATING  
PROCEDURES (SOP) FOR THE PROCESSING OF EXPENDABLE  
ORDNANCE AT NAVY AND MARINE CORPS ACTIVITIES)

Objective: To compare reference (a) with reference (b) to determine compliance  
with reference (b).

Background: Page 1-1 of reference (a) states that The UXO Support Plan  
procedures incorporate the guidance and requirements of reference (b),  
NAVSEA OP 5 and US Army Engineering and Support Center, Huntsville  
Engineering Pamphlet 75-1-2 in the preparation and execution of their Standard  
Operating Procedures for site 41-Scrap Yard remedial action.

Reference (b) contains nine mandatory sections that must be addressed to  
insure a solid foundation for a functional SOP. The following is an analysis of  
reference (a) for compliance reference (b).

1. **RECORD OF APPROVAL**. Reference (a) does not contain a record for  
signatures and dating by personnel with final approval authority or any provision  
for SOP review or a validation process.
2. **SUPERVISOR'S STATEMENT**. Reference (a) has no provision to indicate  
that the supervisor has reviewed and signed a statement that states a clear  
understanding of his/her duties with regard to the SOP.
3. **WORKER'S STATEMENT**. Reference (a) has no provision to indicate that  
the worker has reviewed and signed a statement that states a clear  
understanding of his/her duties with regard to the operation in the SOP.
4. **STEP-BY-STEP PROCEDURE**. The step-by-step procedures contained in  
reference (a) are general in nature and do not constitute a clearly defined method  
to perform the task/s
5. **DIAGRAMS**. Reference (a) does not nave a detailed site diagram showing  
the location of various safety-related items with respect to the work site. Safety  
related items include fire extinguishers, eye wash stations, first aid kits, spill

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cleanup kits etc. This site diagram must also clearly illustrate evacuation routes and emergency exits.

**PROCESSING DIAGRAM.** Reference (a) does not contain a processing site diagram. This diagram includes information needed to clarify or amplify the information provided in the step-by-step procedure. This diagram will indicate the steps in the flow of material through the various processing stages.

6. **EQUIPMENT LIST.** Reference (a) does not provide an approved equipment list that which is or may be used in the processing.

**SAFETY EQUIPMENT LIST.** Reference (a) does not provide a list of safety equipment (including personal protective equipment) and systems, which must be in place and working properly in order to protect the safety of personnel, equipment, facilities and the environment during the processing.

7. **HAZARDS, HAZARDS CONTROL AND HAZARD CONTROL BRIEFINGS.** Reference (a) does not contain any documentation indicating that hazard control briefing are conducted or recorded.

8. **EMERGENCY RESPONSE AND CONTINGENCY PLANS.** Reference (a) does not provide a list of accidents or incidents (fire, spill, explosion, mechanical failure, injury, etc) which could occur during processing and which would require immediate action and control. This list must also contain points of contacts for each case and include any follow up actions.

9. **SECURITY.** Reference (a) does not provide the requirements necessary to maintain physical security, accountability, and control of ordnance items and inherent components, hazardous material, tools and equipment items.

**CONCLUSION.** Reference (a) contains a great deal of information but fails in being a functional SOP. Reference (a) is not in compliance with reference (b).

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(3) Specialized handling, support, and test equipment used in ammunition production.

c. Exchanging Hazard Analyses. The DoD Components shall exchange hazard analysis data, particularly emphasizing those areas of clear mutual interest. The control points at which such exchanges will occur are those listed in paragraph B.1.a., above.

d. Role of the JOCG Safety Group. The JOCG Safety Group:

(1) Through its meetings and continuing communication, identifies hazard analysis efforts that merit joint participation, and arranges for such participation. The objectives are to achieve timely results, avoid unwarranted duplication of effort, and maximize the benefits of such analyses.

(2) On an annual basis, compiles:

(a) A description of hazard analyses completed during the previous FY.

(b) A description of those analyses that merit joint cooperation, and makes appropriate recommendations to the JOCG.

C. DECONTAMINATION

This section specifies joint policies and procedures for decontamination and disposal of contaminated facilities, land, tooling, material, equipment, and ordnance. These policies and procedures apply to all DoD Components and subordinate installations and activities, including DoD contractors and subcontractors, having knowledge or possession of contaminated items.

1. Decontamination Policies

a. Planning. Each location or project accomplishing decontamination or cleanup shall prepare detailed plans for decontamination cleanup of specific items. Plans shall include protective clothing and equipment requirements. All plans and instructions shall be in writing. Detailed plans shall include requirements for compliance with OSHA and EPA standards. Plans shall include input from design engineers, safety engineers, toxicologists, health physicists, and representatives from installations. A process flowsheet describing the decontamination process shall be prepared. The flowsheet shall indicate such subjects as critical operating levels of the procedures, regeneration steps, upset conditions, and the likelihood of undesirable material forming in a particular section or piece of equipment. Specific tests to determine the quantitative values of explosives at each step must be included and must reflect the latest analytical capabilities. Reliable data on the physical, chemical, and hazardous properties of all components in each flowsheet step (feed, intermediate, recycle, product, byproduct, waste,

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1. Identification of the item or complex involved.
2. Office of Record (that segment having responsibility for facility or equipment).
3. Subjects to be included in record of facilities and equipment that have been contaminated are, at a minimum:
  - a. Previous use (include type of contaminant involved).
  - b. Decontamination procedure used.
  - c. Decontamination status degree.
  - d. Special instructions.
  - e. Restrictions.
  - f. Identification of critical points of operation.
  - g. List of personnel knowledgeable about facility.
  - h. Transfer lines, drains, sumps, etc., involved.
  - i. Identity of equipment.
  - j. Site plans.
  - k. Signatures of personnel preparing and approving record.
  - l. Dates of various actions.
4. Decontamination markings will be painted on all decontaminated facilities. Contaminated real property shall be placarded appropriately. DD Form 2271, "Decontamination Tag," will be affixed to all contaminated or decontaminated equipment or material scheduled for standby or layaway status, transfer to DoD installations, or release through property disposal channels.

Figure 11-5. Record of Decontamination.

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catalysts, inhibitors, and additives) shall be included. Other information for each step must include consideration of flammability, autoignition, flashpoint, spontaneous heating, reactivity, shock sensitivity, pyrophoricity, toxicity, differential thermal analysis, and corrosiveness.

d. Record Keeping. A complete record (figure 11-5.) shall be prepared of decontamination and cleanup actions performed in each area and on each piece of equipment and tooling when operations in a contaminated area are discontinued for the purpose of putting the item in standby, dismantling, demolition, alteration, conversion, repair, or maintenance. This record is to acquaint people working in the area as to what hazards may exist so they may use the proper precautions.

c. Procedural Requirements. Written procedures shall be prepared in advance for operations in a contaminated area of a routine recurring nature. Examples of such operations include preventive maintenance involving oiling and greasing equipment, changing light bulbs and fuses, changing dies and punches in presses, replacing broken keys in presses, repairing or replacing belts or adjusting presses, set up, and the like. The commander or designated agent shall review and approve the procedures. Review, update, and approval of procedures are required annually or more frequently when indicated by changing conditions.

d. Contaminated Area. The area within which the contaminant is contained. Examples include the inside compartments of a laboratory glove box; a single room within a building; an entire building or group of buildings with associated services such as drains, sumps, exhaust units, ramps, or a narrow gauge railroad; open terrain, such as test and demolition areas; or a vehicle.

#### e. Cleaning Requirements for Contaminated Items

(1) All standby contaminated items that will remain in place or in storage at the installation or activity shall be cleaned of hazardous substances to a minimum of XXX degree to make them safe for maintenance by experienced personnel.

(2) All contaminated items to be used for the same purpose and that are relocated or transferred to another knowledgeable segment within the installation or activity, transferred to a knowledgeable Government installation or activity, or furnished to a knowledgeable contractor shall be cleaned of hazardous contaminants to a minimum of XXX degree before moving to make them safe for handling and use by experienced personnel. "Knowledgeable" is a qualifying condition to restrict locations to which an item can be sent. It refers to the ability of the receiver to handle the contaminant(s) involved. These items shall not be transferred to the above locations or areas outside of the contaminant area into station supply and stock control departments, or BPDs, without the written approval of the commander or the commander's designated agent.

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(3) All contaminated items planned for release to the general public shall be decontaminated to an XXXXX degree before transfer to DP00s.

f. Production Byproduct Contamination. Contaminated material or ordnance generated as a result of producing a commodity shall be handled in accordance with approved procedures. Material or ordnance includes rags, reject material, unused products, uniforms, munitions and subcomponents, paper and packaging materials, and other items exposed to contaminants.

g. Prohibitions Against Burial of Contaminants. Burial of any material or ordnance contaminated with explosives, chemical agents, or other reactive chemicals is prohibited. In situations where an underground pipe or ground area (including existing burial sites) contains a contaminant, such locations will be indicated on plot plans, as well as on the ground, by signs and appropriate fencing. These sites shall remain posted and fenced until they are cleaned completely of contaminants.

h. Maintaining Contaminated Area Plot Plans. Installations and activities shall prepare plot plans showing contaminated and uncontaminated areas; operating lines with specific buildings or structures; and ground, surface, and underground waste process lines. The plot plans shall be used as a guide in determining whether an item should be considered as coming from a contaminated area. In the absence of any indication on the plot plan that an area is uncontaminated, it shall be considered a contaminated area, and items within it treated accordingly. All components, rooms, buildings, or test and demolition areas in which a contaminant is present shall be posted conspicuously with the following sign: - CAUTION - CONTAMINATED AREA (insert name of contaminant). Sign color and size shall be as shown in figure 11-6. Signs must be posted at all points of entry into the contaminated area.

i. Items That Cannot Be Decontaminated Completely. Contaminated items that would lose their usefulness if subjected to procedures for complete decontamination may be worked on according to written procedures established for each situation as it arises.

j. Transfer of Contaminated Ordnance. Certain ordnance can become contaminated by the nature of its use or intended use or may contain a contaminant. When such ordnance is to be transferred to or from laboratories, to offices, to shops, to or from storage, to disposal, or remains in place for testing, modification, or use in displays or models, they will be decontaminated completely or handled according to specific handling instructions developed for the material involved. Examples of such ordnance include the following:

(1) Containers or inner packaging materials that are or have been in contact with hazardous materials.

(2) Munitions and associated components.

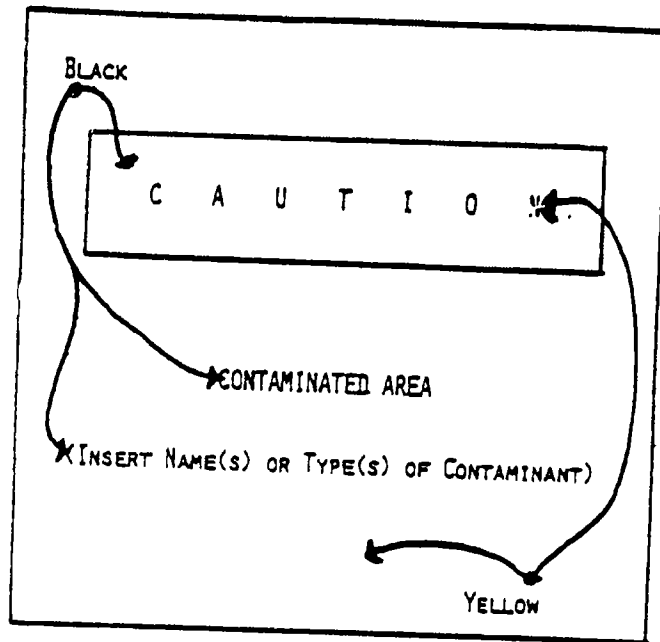
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Size of black rectangular panel containing the word CAUTION and the size of the letters used for the word CAUTION, etc., will vary with the outside dimensions of the sign.

Figure 11-6. Contaminant Sign.

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(3) Radioactive components.

(4) Test fixtures.

k. Commodities in Production. Material or ordnance in production shall be handled according to approved written procedures that provide for alternate controls of such materials or ordnance, such as inspection and certification byproduct assurance or QA personnel.

l. Incompatible Contaminated Material. Incompatible contaminated material shall be segregated in storage by providing separate storage facilities or sites. Compatible material having different degrees of decontamination shall be segregated in storage.

m. Transportation of Items Decontaminated to an XXX Degree. These items shall be transported only in Government-approved vehicles under Government control.

n. Working on Items Decontaminated to an XXX Degree. Except for flashing operations, which are permitted under established procedures, such items shall not be worked on with open flame, high temperature heating devices, or devices that generate heat during use due to friction, rubbing, or cutting without specific written and approved procedures. Friction generating devices include hand or power drills and saws, lathes, and powered wire brushing.

o. Identification of Items Moved To or From a Contaminated Area. These items shall be identified and documented as follows:

(1) Items placed in standby or transferred to another location shall be marked with conspicuously painted yellow Xs or Os, as appropriate. Another contrasting color is used when the items to be marked are painted yellow. Exceptions to this rule include material and ordnance covered in subparagraphs C.1.e.(1), g. and k. above; items being tooling up or repaired in place; and items in or from an uncontaminated area.

(2) Items placed in standby, dismantled, demolished, altered, repaired, disposed of, or transferred shall be tagged with a DU Form 2271, "Decontamination Tag" (figure 11-7.), indicating methods, type and degree of contamination, and restrictions on handling. The Decontamination Tag shall be obtained from the appropriate Military Service activity. Exceptions to tagging requirements are as follows:

(a) Material and ordnance covered in paragraphs C.1.f. and j., above, and items covered by written procedures providing for alternate means of identification of decontamination status will not be tagged.

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DECONTAMINATION TAG		
THIS TAG IS VOID IF ALTERED, MODIFIED IN ANY WAY, OR ATTACHMENT SEAL IS BROKEN. REMOVE TAG AND KEEP FOR YOUR RECORD BEFORE USING ITEM. FILL OUT STUB AND SEND TO INSTALLATION/ACTIVITY SAFETY OFFICE. COMPLETE INSTRUCTIONS FOR THE USE OF THIS FORM ARE LOCATED IN EACH DOD COMPONENT REGULATION.		
NAME OF INSTALLATION/ ACTIVITY	SERIAL NO.	REPLACES TAG SERIAL NO.
DEGREE OF DECONTAMINATION <small>(Let this be not crossed out indicate degree)</small>		DATE DECONTAMINATED <small>(YYMMDD)</small>
XXXXXX		
DESCRIPTION OF ITEM		
ITEM USED FOR	NAME OF CONTAMINANT	
ITEM SERIAL/MODEL NO.	ITEM TAGGED AT BUILDING/AREA	
REASON FOR DECONTAMINATION		
<input type="checkbox"/> REPAIR IN PLACE <input type="checkbox"/> TRANSFER TO _____ FOR _____		
<input type="checkbox"/> OTHER <small>(as plain)</small>		
DECONTAMINATION PROCEDURE USED		STANDARD OPERATING PROCEDURE NO.
<input type="checkbox"/> HOT WATER <input type="checkbox"/> FLAME TEMP: _____		
<input type="checkbox"/> STEAM <input type="checkbox"/> OVEN: HOURS: _____		
<input type="checkbox"/> SOLVENT: TYPE: _____		
SPECIFIC INSTRUCTIONS/ADDITIONAL INFORMATION		
SIGNATURES		
DECONTAMINATING SUPERVISOR		DATE (YYMMDD)
INSPECTING SAFETY OFFICE REPRESENTATIVE		DATE (YYMMDD)
NAME OF INSTALLATION/ACTIVITY		SERIAL NO.
NAME OF PERSON REMOVING TAG <small>(Last, First, MI)</small>		DATE (YYMMDD)
REASON TAG REMOVED		
<input type="checkbox"/> ITEM BEING USED <input type="checkbox"/> TAG REPLACED BY TAG NO. _____		
<input type="checkbox"/> OTHER <small>(as plain)</small>		

DD Form 2271  
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REPLACES DA FORM 3803, WHICH MAY BE USED  
UNTIL SUPPLY EXHAUSTED.

Figure 11-7. DD Form 2271, "Decontamination Tag."

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(b) Items in or from an uncontaminated area do not require tags.

(3) All transfer documents, work orders, and the like on an item shall be annotated with the appropriate degree of contamination (X, XX, XXX, XXXXX, or U) whether the item comes from a contaminated or uncontaminated area.

p. Reflecting Change in Decontamination Degree. When the degree of decontamination is changed, the old tag shall be replaced with a new tag according to instructions on the tag, and markings shall be changed to show the latest status of the item. Additionally, all documents shall be changed to correspond.

q. Removing Decontamination Tags. When an item is to be placed in service, the tag shall be removed in accordance with instructions on the tag, and the yellow markings obliterated before use.

r. Controlling Access to Contaminated Items. Access to areas containing contaminated items shall be controlled. Jurisdiction always shall be under the direction of persons knowledgeable with the item and contaminant involved.

s. Designing for Demilitarization Safety. Demilitarization safety shall be designed into items from conception through initial operation and completion to provide for safe, convenient, and economical methods of decontamination.

2. Decontamination Procedures

a. Specified officials at installations and activities shall:

(1) Ensure adequate written procedures for decontamination of items are prepared and approved by a designated representative before initiating a request for disposal, shipment, transfer, maintenance, or repairs.

(2) Ensure that a safety representative makes an actual on-site inspection of the item and provide a written certification of the degree of contamination.

(3) Ensure that personnel (drivers, supervisors, warehousemen, repairmen, tool room attendants, and so forth) transporting, receiving, relocating, or performing work (setup, maintenance, repairs, alterations, and modifications) are aware of the restrictions on handling, are acquainted thoroughly with the hazards involved and the written operational procedures, and know how to verify that the item is decontaminated properly.

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(4) Issue written procedures to ensure that all reject or obsolete materials, equipment, facilities, and generated waste are disposed of on a timely basis and by an approved method.

(5) Maintain appropriate records of contaminated areas, equipment, and facilities. The records should contain the information shown in figure 11-5.

(6) Ensure that all contaminated equipment or material to be transferred between installations, or from one area of an installation to another, is tagged, marked, and documents are annotated properly as to the degree of contamination.

(7) Ensure that installation safety concurrence is obtained before submitting a request for disposal approval or funding projects for disposal.

(8) Submit requests to the appropriate agency of the aware DoD Component for approval of the method of decontamination for disposal of any contaminated land or facilities. The requests must include at least the following:

(a) Description of the facility or land involved, type and degree of contamination, method of decontamination, method of dismantling, and disposal action. Any items for disposal without restricted use must include decontamination to an XXXXX degree.

(b) A written procedure applicable to the specific job. Generalized procedures are not adequate.

(9) Submit a request for approval of disposal of buildings and improvements to the appropriate agency of the aware DoD Component. The request must contain the following information:

(a) Type of contamination.

(b) Degree of decontamination.

(c) Date of safety concurrence.

b. The Chief, Safety Office, of the appropriate agency of the aware DoD Component shall:

(1) Review and evaluate all requests, procedures, and instructions on method of disposal of contaminated facilities or land.

(2) Ensure that appropriate decontamination documents are included in the contract for contractor or subcontractor compliance.



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c. The Military Service agency possessing an item shall fund for the work needed to accomplish decontamination or disposal of the item.

D. HCSDS

This section spells out responsibilities for the execution and administration of hazardous item contracts at all ammunition plants, including GOGO, GOCO, and COCO installations. Hazardous item contracts are contracts requiring the research, development, manufacturing, loading, testing, and handling of ammunition, explosives, and other unique military-related dangerous materials. These responsibilities apply both to the SMCA and the developing Military Service:

1. Basic Policies

a. Identifying Hazardous Item Contracts. All hazardous item contracts shall be identified by a cover sheet, DD Form 2356 (figure 11-8.), stating the item nomenclature and indicating that the contract involves hazardous material.

b. When to Use the HCSDS. An HCSDS, DD Form 2357 (figure 11-9.), shall be developed for each hazardous material, component, and assembly in a hazardous item contract. See Appendix I for instructions on preparing the HCSDS. Microfilm copies of all HCSDS shall be supplied to the SMCA for contract administration. A list of all HCSDS, by number and nomenclature, shall be made a part of the TDP and integrated in or annexed to the production and procurement package. The developing Military Service responsible for the hazardous commodity shall initiate the HCSDS and the HCSDS list. Local reproduction of DD Form 2357 is authorized.

c. Cases in Which the HCSDS May Not Be Required. The HCSDS must be prepared for all ammunition, explosives, and other unique military-related dangerous material (lethal and incapacitating agents). However, HCSDS normally are not prepared for commercially available items (acetone, lacquer, and the like) that may be used in the manufacture of the military items. For these items, instructions shall be included in the contractual document to advise the contractor that there may be other hazardous materials involved. In addition, the contractor should, under the provisions of OSHA, obtain Material Safety Data Sheets (OSHA Form 20 or equivalent) from the product manufacturer.

2. HCSDS Procedures

a. The SMCA shall:

(1) Establish and maintain a central repository of HCSDSs and provide a semiannual listing and monthly update of new or revised entries to the developing Military Service.

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